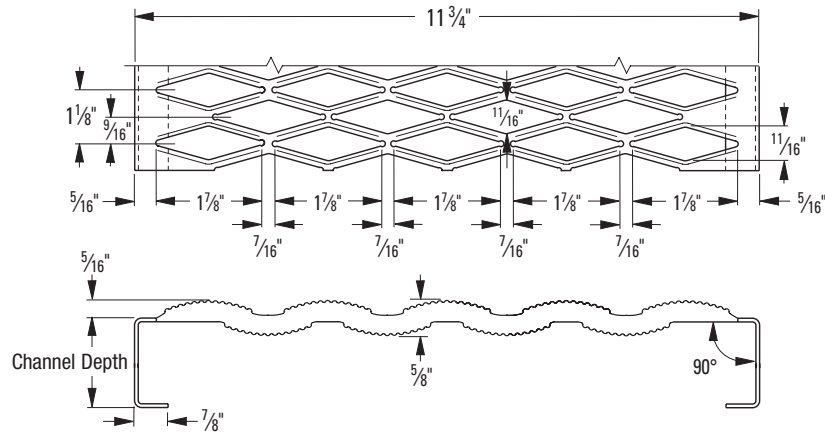


# GRIP STRUT® SAFETY GRATING LOAD TABLES

## 5-DIAMOND PLANK — 11-3/4" WIDTH



### Grip Strut 5-Diamond Plank — 11-3/4" Width

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)  
Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.<sup>2</sup>

| Material Gauge              | Channel Depth in. | Weight lb./lin. ft. | Catalog Number | Load/Defl. Code | Span  |       |       |       |       |       |       |       |       |       |       |       |       |
|-----------------------------|-------------------|---------------------|----------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                             |                   |                     |                |                 | 2'-0" | 2'-6" | 3'-0" | 3'-6" | 4'-0" | 4'-6" | 5'-0" | 5'-6" | 6'-0" | 6'-6" | 7'-0" | 7'-6" | 8'-0" |
| Steel 14 ga.                | 1-1/2"            | 4.2                 | 51514          | U               | 536   | 344   | 240   | 177   | 136   | 108   | 88    | 74    | 62    |       |       |       |       |
|                             |                   |                     |                | D               | .06   | .10   | .14   | .20   | .26   | .33   | .41   | .50   | .60   |       |       |       |       |
|                             |                   |                     |                | C               | 525   | 422   | 353   | 304   | 267   | 239   | 216   | 198   | 183   |       |       |       |       |
|                             |                   |                     |                | D               | .05   | .08   | .12   | .16   | .21   | .26   | .33   | .40   | .48   |       |       |       |       |
|                             | 2"                | 4.4                 | 52014          | U               | 890   | 571   | 397   | 293   | 225   | 178   | 145   | 120   | 102   | 87    | 76    | 66    | 59    |
|                             |                   |                     |                | D               | .06   | .09   | .13   | .17   | .23   | .29   | .36   | .43   | .52   | .61   | .71   | .83   | .95   |
|                             |                   |                     |                | C               | 707   | 699   | 584   | 502   | 440   | 393   | 355   | 324   | 299   | 277   | 259   | 243   | 230   |
|                             |                   |                     |                | D               | .04   | .07   | .10   | .14   | .18   | .23   | .29   | .35   | .42   | .49   | .57   | .66   | .76   |
|                             | 2-1/2"            | 4.7                 | 52514          | U               | 1021  | 655   | 456   | 336   | 258   | 204   | 166   | 138   | 116   | 100   | 86    | 76    | 67    |
|                             |                   |                     |                | D               | .04   | .06   | .08   | .11   | .14   | .18   | .23   | .28   | .33   | .39   | .45   | .52   | .60   |
|                             |                   |                     |                | C               | 707   | 707   | 669   | 575   | 505   | 450   | 407   | 371   | 342   | 317   | 296   | 278   | 262   |
|                             |                   |                     |                | D               | .02   | .04   | .06   | .09   | .12   | .15   | .18   | .22   | .26   | .31   | .36   | .42   | .48   |
| Steel 12 ga.                | 1-1/2"            | 5.9                 | 51512          | U               | 710   | 456   | 318   | 235   | 181   | 144   | 117   | 98    | 83    | 71    | 62    | 55    | 49    |
|                             |                   |                     |                | D               | .07   | .11   | .15   | .21   | .27   | .35   | .44   | .53   | .64   | .76   | .89   | 1.03  | 1.18  |
|                             |                   |                     |                | C               | 695   | 558   | 467   | 402   | 354   | 317   | 287   | 263   | 244   | 227   | 213   | 201   | 190   |
|                             |                   |                     |                | D               | .05   | .08   | .12   | .17   | .22   | .28   | .35   | .43   | .51   | .60   | .71   | .82   | .95   |
|                             | 2"                | 6.2                 | 52012          | U               | 1131  | 725   | 505   | 372   | 286   | 227   | 185   | 154   | 130   | 111   | 97    | 85    | 75    |
|                             |                   |                     |                | D               | .05   | .08   | .11   | .16   | .20   | .26   | .32   | .39   | .47   | .56   | .65   | .75   | .86   |
|                             |                   |                     |                | C               | 1107  | 888   | 742   | 638   | 561   | 501   | 453   | 414   | 382   | 355   | 332   | 312   | 295   |
|                             |                   |                     |                | D               | .04   | .06   | .09   | .12   | .16   | .21   | .26   | .31   | .38   | .44   | .52   | .60   | .69   |
|                             | 2-1/2"            | 6.6                 | 52512          | U               | 1691  | 1083  | 753   | 554   | 425   | 337   | 273   | 226   | 151   | 141   | 123   | 109   | 87    |
|                             |                   |                     |                | D               | .04   | .06   | .09   | .13   | .17   | .21   | .26   | .32   | .38   | .45   | .52   | .60   | .68   |
|                             |                   |                     |                | C               | 1115  | 1115  | 1106  | 950   | 833   | 742   | 669   | 610   | 561   | 519   | 484   | 453   | 426   |
|                             |                   |                     |                | D               | .02   | .04   | .07   | .10   | .13   | .17   | .21   | .25   | .30   | .36   | .41   | .48   | .55   |
|                             | 3"                | 7.0                 | 53012          | U               | 2138  | 1370  | 952   | 701   | 537   | 425   | 345   | 286   | 241   | 206   | 178   | 155   | 137   |
|                             |                   |                     |                | D               | .04   | .06   | .08   | .11   | .14   | .18   | .22   | .27   | .32   | .38   | .44   | .51   | .58   |
|                             |                   |                     |                | C               | 1115  | 1115  | 1115  | 1115  | 1052  | 937   | 845   | 770   | 707   | 654   | 609   | 570   | 537   |
|                             |                   |                     |                | D               | .02   | .03   | .05   | .08   | .11   | .15   | .18   | .22   | .26   | .31   | .36   | .41   | .47   |
| Stainless Steel 304 16 ga   | 2"                | 3.7                 | 52016-S        | U               | 583   | 374   | 261   | 192   | 148   | 118   | 96    | 80    | 68    | 58    | 48    |       |       |
|                             |                   |                     |                | D               | .05   | .08   | .11   | .16   | .20   | .26   | .32   | .39   | .47   | .56   | .61   |       |       |
|                             |                   |                     |                | C               | 464   | 458   | 323   | 330   | 290   | 259   | 235   | 215   | 199   | 185   | 165   |       |       |
|                             |                   |                     |                | D               | .03   | .06   | .09   | .12   | .16   | .21   | .26   | .32   | .38   | .45   | .49   |       |       |
| Stainless Steel 316L* 16 ga | 2"                | 3.7                 | 52016-SL       | U               | 406   | 324   | 225   | 165   | 126   | 100   | 81    | 66    | 56    | 47    |       |       |       |
|                             |                   |                     |                | D               | .04   | .06   | .10   | .13   | .17   | .22   | .27   | .32   | .39   | .45   |       |       |       |
|                             |                   |                     |                | C               | 398   | 397   | 330   | 283   | 248   | 220   | 198   | 180   | 165   | 152   |       |       |       |
|                             |                   |                     |                | D               | .03   | .05   | .08   | .10   | .14   | .17   | .22   | .26   | .31   | .36   |       |       |       |

\*Available upon special order.

# GRIP STRUT® SAFETY GRATING LOAD TABLES (5-Diamond plank, 11-3/4" Width)

## Grip Strut 5-Diamond Plank — 11-3/4" Width

Allowable loads and deflections: U=Uniform load (lb./ft.<sup>2</sup>) C= Concentrated load (lb.) D=Deflection (in.)  
Spans to the left of heavy red line produce a deflection of 1/4" or less under a uniform load of 100 lb./ft.<sup>2</sup>

| Material Gauge         | Channel Depth in. | Weight lb./lin. ft. | Catalog Number | Load/Defl. Code | Span  |       |       |       |       |       |       |       |       |       |       |       |       |
|------------------------|-------------------|---------------------|----------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                        |                   |                     |                |                 | 2'-0" | 2'-6" | 3'-0" | 3'-6" | 4'-0" | 4'-6" | 5'-0" | 5'-6" | 6'-0" | 6'-6" | 7'-0" | 7'-6" | 8'-0" |
| Alum. Alloy 5052 .080" | 1-1/2"            | 1.49                | 51512-A        | U               | 403   | 255   | 179   | 132   | 100   |       |       |       |       |       |       |       |       |
|                        |                   |                     |                | D               | .10   | .15   | .22   | .31   | .40   |       |       |       |       |       |       |       |       |
|                        |                   |                     |                | C               | 395   | 316   | 263   | 226   | 197   |       |       |       |       |       |       |       |       |
|                        |                   |                     |                | D               | .08   | .12   | .18   | .25   | .32   |       |       |       |       |       |       |       |       |
|                        | 2"                | 1.59                | 52012-A        | U               | 592   | 379   | 263   | 193   | 148   | 117   | 95    | 78    |       |       |       |       |       |
|                        |                   |                     |                | D               | .08   | .13   | .18   | .25   | .33   | .42   | .52   | .63   |       |       |       |       |       |
|                        |                   |                     |                | C               | 466   | 466   | 386   | 331   | 290   | 257   | 232   | 211   |       |       |       |       |       |
|                        |                   |                     |                | D               | .05   | .10   | .15   | .20   | .27   | .34   | .42   | .51   |       |       |       |       |       |
|                        | 2-1/2"            | 1.67                | 52512-A        | U               | 889   | 569   | 395   | 290   | 222   | 176   | 142   | 118   | 99    | 84    | 73    | 63    |       |
|                        |                   |                     |                | D               | .07   | .10   | .15   | .21   | .28   | .35   | .43   | .53   | .63   | .74   | .85   | .98   |       |
|                        |                   |                     |                | C               | 466   | 466   | 466   | 466   | 435   | 387   | 348   | 316   | 290   | 268   | 249   | 232   |       |
|                        |                   |                     |                | D               | .02   | .05   | .10   | .16   | .22   | .28   | .35   | .42   | .50   | .59   | .68   | .78   |       |
|                        | 3"                | 1.75                | 53012-A        | U               | 951   | 699   | 485   | 357   | 273   | 216   | 175   | 144   | 121   | 103   | 89    | 78    | 68    |
|                        |                   |                     |                | D               | .05   | .09   | .14   | .19   | .25   | .31   | .39   | .47   | .56   | .66   | .77   | .88   | 1.00  |
|                        |                   |                     |                | C               | 466   | 466   | 466   | 466   | 466   | 466   | 428   | 389   | 356   | 329   | 305   | 285   | 267   |
|                        |                   |                     |                | D               | .02   | .04   | .07   | .11   | .17   | .24   | .31   | .38   | .45   | .53   | .61   | .70   | .80   |
| Alum. Alloy 5052 .100" | 1-1/2"            | 1.88                | 51510-A        | U               | 459   | 294   | 204   | 150   | 115   | 91    |       |       |       |       |       |       |       |
|                        |                   |                     |                | D               | .09   | .15   | .22   | .30   | .39   | .50   |       |       |       |       |       |       |       |
|                        |                   |                     |                | C               | 450   | 360   | 300   | 257   | 225   | 200   |       |       |       |       |       |       |       |
|                        |                   |                     |                | D               | .07   | .12   | .17   | .24   | .31   | .40   |       |       |       |       |       |       |       |
|                        | 2"                | 2.00                | 52010-A        | U               | 829   | 530   | 368   | 271   | 207   | 164   | 133   | 110   | 92    | 78    | 68    | 59    |       |
|                        |                   |                     |                | D               | .09   | .14   | .20   | .28   | .37   | .46   | .58   | .70   | .83   | .98   | 1.13  | 1.30  |       |
|                        |                   |                     |                | C               | 714   | 649   | 541   | 464   | 406   | 361   | 325   | 295   | 270   | 250   | 232   | 216   |       |
|                        |                   |                     |                | D               | .06   | .11   | .16   | .22   | .29   | .37   | .46   | .56   | .66   | .78   | .90   | 1.04  |       |
|                        | 2-1/2"            | 2.11                | 52510-A        | U               | 1140  | 730   | 507   | 372   | 285   | 225   | 182   | 151   | 127   | 105   | 93    | 81    | 71    |
|                        |                   |                     |                | D               | .07   | .11   | .16   | .22   | .28   | .36   | .45   | .54   | .64   | .76   | .88   | 1.01  | 1.15  |
|                        |                   |                     |                | C               | 714   | 714   | 714   | 638   | 558   | 496   | 446   | 406   | 372   | 343   | 319   | 298   | 279   |
|                        |                   |                     |                | D               | .03   | .07   | .12   | .17   | .23   | .29   | .36   | .43   | .51   | .60   | .70   | .81   | .92   |
|                        | 3"                | 2.22                | 53010-A        | U               | 1458  | 942   | 654   | 481   | 368   | 291   | 235   | 195   | 164   | 139   | 120   | 105   | 92    |
|                        |                   |                     |                | D               | .05   | .08   | .12   | .17   | .22   | .28   | .34   | .42   | .50   | .59   | .68   | .78   | .89   |
|                        |                   |                     |                | C               | 714   | 714   | 714   | 714   | 714   | 640   | 576   | 524   | 480   | 443   | 412   | 384   | 360   |
|                        |                   |                     |                | D               | .02   | .04   | .07   | .12   | .17   | .22   | .27   | .33   | .40   | .47   | .54   | .62   | .71   |

\*Available upon special order.

## Engineering Data (for both channels)

| Material Gauge        | Channel Depth in. | Sx in. <sup>3</sup> | Ix in. <sup>4</sup> | EI lb. x in. <sup>2</sup> |
|-----------------------|-------------------|---------------------|---------------------|---------------------------|
| Steel 14 ga.          | 1-1/2"            | .174                | .102                | 2.96 x 10 <sup>6</sup>    |
|                       | 2"                | .270                | .193                | 5.60 x 10 <sup>6</sup>    |
|                       | 2-1/2"            | .307                | .335                | 9.71 x 10 <sup>6</sup>    |
| Steel 12 ga.          | 1-1/2"            | .216                | .125                | 3.62 x 10 <sup>6</sup>    |
|                       | 2"                | .342                | .264                | 7.66 x 10 <sup>6</sup>    |
|                       | 2-1/2"            | .504                | .488                | 14.09 x 10 <sup>6</sup>   |
| Aluminum .080"        | 3"                | .625                | .722                | 20.94 x 10 <sup>6</sup>   |
|                       | 1-1/2"            | .171                | .137                | 1.40 x 10 <sup>6</sup>    |
|                       | 2"                | .251                | .246                | 2.51 x 10 <sup>6</sup>    |
| Aluminum .100"        | 2-1/2"            | .379                | .441                | 4.50 x 10 <sup>6</sup>    |
|                       | 3"                | .464                | .602                | 6.14 x 10 <sup>6</sup>    |
|                       | 1-1/2"            | .196                | .156                | 1.59 x 10 <sup>6</sup>    |
| Aluminum 16 ga.       | 2"                | .352                | .309                | 3.15 x 10 <sup>6</sup>    |
|                       | 2-1/2"            | .486                | .544                | 5.55 x 10 <sup>6</sup>    |
|                       | 3"                | .627                | .911                | 9.29 x 10 <sup>6</sup>    |
| Stainless 304 16 ga.  | 2"                | .165                | .1425               | 4.13 x 10 <sup>6</sup>    |
| Stainless 316L 16 ga. | 2"                | .165                | .1425               | 4.13 x 10 <sup>6</sup>    |

## Strut Loading

| Material Gauge        | Type Loading** | Load | Deflection in. |
|-----------------------|----------------|------|----------------|
| Steel 14 ga.          | U              | 1444 | .18            |
|                       | Cs             | 707  | .15            |
| Steel 12 ga.          | U              | 2277 | .15            |
|                       | Cs             | 1115 | .12            |
| Aluminum .080"        | U              | 951  | .24            |
|                       | Cs             | 466  | .20            |
| Aluminum .100"        | U              | 1458 | .27            |
|                       | Cs             | 714  | .22            |
| Stainless 304 16 ga.  | U              | 947  | .38            |
|                       | Cs             | 464  | .31            |
| Stainless 316L 16 ga. | U              | 812  | .31            |
|                       | Cs             | 398  | .25            |

\*\* U = Allowable uniform load (lb./ft.<sup>2</sup>)

Cs = Allowable concentrated load per ft. of length at mid-width (lb./ft.)