

# DEEP-DEK® 6.0 ACOUSTICAL ALLOWABLE DIAPHRAGM SHEAR VALUES



5/8" DIAMETER PUDDLE WELDS AT SUPPORTS  
WELDED SIDELAPS

|                 |        | 20 Gauge Deep-Dek® 6.0 Acoustical  |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------------|--------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sidelap Spacing |        | Span (ft), 12/2 Attachment Pattern |        |        |        |        |        |        |        |        |        |        |        |        |        |
| o/c             | 10'-0" | 11'-0"                             | 12'-0" | 13'-0" | 14'-0" | 15'-0" | 16'-0" | 17'-0" | 18'-0" | 19'-0" | 20'-0" | 21'-0" | 22'-0" | 23'-0" | 24'-0" |
| 6"              | 1405   | 1396                               | 1389   | 1383   | 1377   | 1373   | 1368   | 1365   | 1361   | 1358   | 1356   | 1353   | 1351   | 1349   | 1347   |
| 8"              | 1197   | 1186                               | 1176   | 1168   | 1161   | 1155   | 1149   | 1145   | 1140   | 1137   | 1133   | 1130   | 1127   | 1124   | 1122   |
| 10"             | 1044   | 1031                               | 1019   | 1010   | 1002   | 995    | 989    | 983    | 978    | 974    | 970    | 966    | 963    | 960    | 957    |
| 12"             | 928    | 914                                | 902    | 892    | 883    | 875    | 868    | 862    | 857    | 852    | 848    | 844    | 840    | 837    | 834    |
| 15"             | 799    | 786                                | 774    | 763    | 754    | 745    | 738    | 731    | 725    | 720    | 716    | 711    | 707    | 704    | 701    |
| 18"             | 690    | 677                                | 665    | 656    | 648    | 641    | 635    | 630    | 625    | 621    | 617    | 613    | 610    | 607    | 604    |
| 20"             | 636    | 623                                | 612    | 602    | 594    | 587    | 581    | 575    | 571    | 566    | 562    | 559    | 556    | 553    | 550    |
| 24"             | 555    | 541                                | 530    | 521    | 513    | 505    | 499    | 494    | 489    | 485    | 481    | 477    | 474    | 471    | 469    |
| 30"             | 473    | 460                                | 449    | 439    | 431    | 424    | 418    | 412    | 408    | 403    | 399    | 396    | 393    | 390    | 387    |
| 32"             | 453    | 439                                | 428    | 419    | 411    | 404    | 398    | 392    | 387    | 383    | 379    | 376    | 372    | 370    | 367    |
| 36"             | 419    | 405                                | 394    | 385    | 377    | 370    | 364    | 358    | 353    | 349    | 345    | 342    | 338    | 336    | 333    |

|                 |        | 18 Gauge Deep-Dek® 6.0 Acoustical  |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------------|--------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sidelap Spacing |        | Span (ft), 12/2 Attachment Pattern |        |        |        |        |        |        |        |        |        |        |        |        |        |
| o/c             | 10'-0" | 11'-0"                             | 12'-0" | 13'-0" | 14'-0" | 15'-0" | 16'-0" | 17'-0" | 18'-0" | 19'-0" | 20'-0" | 21'-0" | 22'-0" | 23'-0" | 24'-0" |
| 6"              | 1823   | 1812                               | 1803   | 1795   | 1788   | 1781   | 1776   | 1771   | 1767   | 1763   | 1760   | 1757   | 1754   | 1751   | 1749   |
| 8"              | 1554   | 1539                               | 1527   | 1516   | 1507   | 1499   | 1492   | 1486   | 1480   | 1475   | 1471   | 1467   | 1463   | 1459   | 1456   |
| 10"             | 1355   | 1338                               | 1323   | 1311   | 1300   | 1291   | 1283   | 1276   | 1270   | 1264   | 1259   | 1254   | 1250   | 1246   | 1242   |
| 12"             | 1205   | 1187                               | 1171   | 1157   | 1146   | 1136   | 1127   | 1119   | 1112   | 1106   | 1100   | 1095   | 1091   | 1086   | 1082   |
| 15"             | 1037   | 1020                               | 1005   | 991    | 978    | 967    | 958    | 949    | 942    | 935    | 929    | 923    | 918    | 914    | 909    |
| 18"             | 896    | 879                                | 864    | 852    | 841    | 832    | 824    | 817    | 811    | 805    | 800    | 796    | 792    | 488    | 785    |
| 20"             | 826    | 808                                | 794    | 781    | 771    | 762    | 754    | 747    | 741    | 735    | 730    | 725    | 721    | 717    | 714    |
| 24"             | 720    | 702                                | 688    | 676    | 665    | 656    | 648    | 641    | 635    | 629    | 624    | 620    | 616    | 612    | 608    |
| 30"             | 614    | 597                                | 582    | 570    | 559    | 550    | 542    | 535    | 529    | 524    | 919    | 514    | 510    | 506    | 503    |
| 32"             | 588    | 570                                | 556    | 544    | 533    | 524    | 516    | 509    | 503    | 497    | 492    | 488    | 483    | 480    | 476    |
| 36"             | 544    | 526                                | 512    | 499    | 489    | 480    | 472    | 465    | 459    | 453    | 448    | 443    | 439    | 436    | 432    |

|                 |        | 16 Gauge Deep-Dek® 6.0 Acoustical  |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------------|--------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sidelap Spacing |        | Span (ft), 12/2 Attachment Pattern |        |        |        |        |        |        |        |        |        |        |        |        |        |
| o/c             | 10'-0" | 11'-0"                             | 12'-0" | 13'-0" | 14'-0" | 15'-0" | 16'-0" | 17'-0" | 18'-0" | 19'-0" | 20'-0" | 21'-0" | 22'-0" | 23'-0" | 24'-0" |
| 6"              | 2251   | 2237                               | 2225   | 2215   | 2207   | 2199   | 2193   | 2187   | 2181   | 2177   | 2172   | 2169   | 2165   | 2162   | 2159   |
| 8"              | 1918   | 1900                               | 1885   | 1872   | 1860   | 1850   | 1842   | 1834   | 1827   | 1821   | 1816   | 1811   | 1806   | 1802   | 1798   |
| 10"             | 1672   | 1651                               | 1634   | 1618   | 1605   | 1594   | 1584   | 1575   | 1567   | 1560   | 1554   | 1548   | 1543   | 1538   | 1533   |
| 12"             | 1488   | 1465                               | 1445   | 1429   | 1415   | 1402   | 1391   | 1382   | 1373   | 1365   | 1358   | 1352   | 1346   | 1341   | 1336   |
| 15"             | 1280   | 1259                               | 1241   | 1223   | 1207   | 1194   | 1182   | 1172   | 1162   | 1154   | 1147   | 1140   | 1134   | 1128   | 1123   |
| 18"             | 1106   | 1085                               | 1067   | 1052   | 1039   | 1028   | 1018   | 1009   | 1001   | 994    | 988    | 983    | 977    | 973    | 968    |
| 20"             | 1019   | 998                                | 980    | 965    | 952    | 940    | 931    | 922    | 914    | 907    | 901    | 896    | 890    | 886    | 881    |
| 24"             | 889    | 867                                | 849    | 834    | 821    | 810    | 800    | 791    | 784    | 777    | 771    | 765    | 760    | 755    | 751    |
| 30"             | 758    | 737                                | 719    | 704    | 691    | 679    | 670    | 661    | 653    | 646    | 640    | 634    | 629    | 625    | 620    |
| 32"             | 726    | 704                                | 686    | 671    | 658    | 647    | 637    | 628    | 621    | 614    | 607    | 602    | 597    | 592    | 588    |
| 36"             | 671    | 650                                | 632    | 617    | 604    | 592    | 583    | 574    | 566    | 559    | 553    | 547    | 542    | 538    | 533    |

|                 |        | 14 Gauge Deep-Dek® 6.0 Acoustical  |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------------|--------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sidelap Spacing |        | Span (ft), 12/2 Attachment Pattern |        |        |        |        |        |        |        |        |        |        |        |        |        |
| o/c             | 10'-0" | 11'-0"                             | 12'-0" | 13'-0" | 14'-0" | 15'-0" | 16'-0" | 17'-0" | 18'-0" | 19'-0" | 20'-0" | 21'-0" | 22'-0" | 23'-0" | 24'-0" |
| 6"              | 2738   | 2721                               | 2707   | 2694   | 2684   | 2675   | 2667   | 2660   | 2653   | 2647   | 2642   | 2638   | 2633   | 2629   | 2626   |
| 8"              | 2333   | 2311                               | 2292   | 2276   | 2263   | 2251   | 2240   | 2231   | 2222   | 2215   | 2208   | 2202   | 2196   | 2191   | 2187   |
| 10"             | 2034   | 2008                               | 1987   | 1968   | 1953   | 1939   | 1927   | 1916   | 1906   | 1899   | 1890   | 1883   | 1876   | 1870   | 1865   |
| 12"             | 1809   | 1782                               | 1758   | 1738   | 1721   | 1706   | 1692   | 1681   | 1670   | 1661   | 1652   | 1644   | 1637   | 1631   | 1625   |
| 15"             | 1557   | 1531                               | 1509   | 1487   | 1469   | 1452   | 1438   | 1425   | 1414   | 1404   | 1395   | 1386   | 1379   | 1372   | 1365   |
| 18"             | 1345   | 1319                               | 1298   | 1279   | 1263   | 1250   | 1238   | 1227   | 1218   | 1209   | 1202   | 1195   | 1189   | 1183   | 1178   |
| 20"             | 1240   | 1213                               | 1192   | 1173   | 1158   | 1144   | 1132   | 1121   | 1112   | 1104   | 1096   | 1089   | 1083   | 1077   | 1072   |
| 24"             | 1081   | 1055                               | 1033   | 1015   | 999    | 985    | 973    | 963    | 953    | 945    | 937    | 930    | 924    | 919    | 913    |
| 30"             | 922    | 896                                | 874    | 856    | 840    | 826    | 814    | 804    | 794    | 786    | 779    | 772    | 765    | 760    | 755    |
| 32"             | 882    | 856                                | 835    | 816    | 800    | 787    | 775    | 764    | 755    | 746    | 739    | 732    | 726    | 720    | 715    |
| 36"             | 816    | 790                                | 768    | 750    | 734    | 721    | 709    | 698    | 689    | 680    | 673    | 665    | 660    | 654    | 649    |



Diaphragm design based on "Steel Deck Institute Diaphragm Design Manual, Third Edition". For diaphragm values of other roof deck assemblies, consult the SDI Diaphragm Design Manual or contact the Metal Dek Group™.  
All calculations are based on a "Single Span Condition". For "Multiple Spans", please contact the Metal Dek Group for additional information.

# DEEP-DEK® 6.0 ACOUSTICAL ALLOWABLE DIAPHRAGM SHEAR VALUES



5/8" DIAMETER PUDDLE WELDS AT SUPPORTS  
#10x3/4" SIDELAP SCREWS AT SIDELAPS

|                 |        | 20 Gauge Deep-Dek® 6.0 Acoustical  |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------------|--------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sidelap Spacing |        | Span (ft), 12/2 Attachment Pattern |        |        |        |        |        |        |        |        |        |        |        |        |        |
| o/c             | 10'-0" | 11'-0"                             | 12'-0" | 13'-0" | 14'-0" | 15'-0" | 16'-0" | 17'-0" | 18'-0" | 19'-0" | 20'-0" | 21'-0" | 22'-0" | 23'-0" | 24'-0" |
| 6"              | 753    | 744                                | 736    | 730    | 725    | 720    | 714    | 709    | 705    | 701    | 697    | 694    | 691    | 688    | 685    |
| 8"              | 589    | 580                                | 573    | 566    | 561    | 556    | 552    | 549    | 545    | 543    | 540    | 538    | 535    | 533    | 532    |
| 10"             | 491    | 482                                | 475    | 468    | 463    | 458    | 454    | 450    | 447    | 444    | 442    | 439    | 437    | 435    | 434    |
| 12"             | 426    | 417                                | 409    | 403    | 397    | 393    | 389    | 385    | 382    | 379    | 376    | 374    | 372    | 370    | 368    |
| 15"             | 360    | 351                                | 344    | 337    | 332    | 327    | 323    | 320    | 316    | 314    | 311    | 309    | 306    | 305    | 303    |
| 18"             | 317    | 308                                | 300    | 294    | 288    | 284    | 280    | 276    | 273    | 270    | 267    | 265    | 263    | 261    | 259    |
| 20"             | 295    | 286                                | 278    | 272    | 267    | 262    | 258    | 254    | 251    | 248    | 246    | 243    | 241    | 239    | 237    |
| 24"             | 262    | 253                                | 246    | 239    | 234    | 229    | 225    | 222    | 218    | 215    | 213    | 210    | 208    | 206    | 205    |
| 30"             | 229    | 220                                | 213    | 207    | 201    | 197    | 192    | 189    | 186    | 183    | 180    | 178    | 176    | 174    | 172    |
| 32"             | 221    | 212                                | 205    | 198    | 193    | 188    | 184    | 181    | 177    | 175    | 172    | 170    | 167    | 166    | 164    |
| 36"             | 208    | 199                                | 191    | 185    | 179    | 175    | 171    | 167    | 164    | 161    | 158    | 156    | 154    | 152    | 150    |

|                 |        | 18 Gauge Deep-Dek® 6.0 Acoustical  |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------------|--------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sidelap Spacing |        | Span (ft), 12/2 Attachment Pattern |        |        |        |        |        |        |        |        |        |        |        |        |        |
| o/c             | 10'-0" | 11'-0"                             | 12'-0" | 13'-0" | 14'-0" | 15'-0" | 16'-0" | 17'-0" | 18'-0" | 19'-0" | 20'-0" | 21'-0" | 22'-0" | 23'-0" | 24'-0" |
| 6"              | 995    | 983                                | 973    | 965    | 958    | 949    | 942    | 935    | 930    | 924    | 920    | 915    | 911    | 908    | 905    |
| 8"              | 778    | 767                                | 757    | 749    | 742    | 735    | 730    | 725    | 721    | 717    | 714    | 711    | 708    | 706    | 703    |
| 10"             | 648    | 637                                | 627    | 619    | 612    | 606    | 600    | 595    | 591    | 587    | 584    | 581    | 578    | 576    | 573    |
| 12"             | 562    | 550                                | 540    | 532    | 525    | 519    | 514    | 509    | 505    | 501    | 497    | 494    | 492    | 489    | 487    |
| 15"             | 475    | 464                                | 454    | 446    | 438    | 432    | 427    | 422    | 418    | 414    | 411    | 408    | 405    | 402    | 400    |
| 18"             | 418    | 406                                | 396    | 388    | 381    | 375    | 369    | 364    | 360    | 356    | 353    | 350    | 347    | 345    | 342    |
| 20"             | 389    | 377                                | 367    | 359    | 352    | 346    | 340    | 336    | 331    | 328    | 324    | 321    | 318    | 316    | 314    |
| 24"             | 345    | 334                                | 324    | 316    | 309    | 302    | 297    | 292    | 288    | 284    | 281    | 278    | 275    | 273    | 270    |
| 30"             | 302    | 290                                | 281    | 272    | 265    | 259    | 254    | 249    | 245    | 241    | 238    | 235    | 232    | 229    | 227    |
| 32"             | 291    | 279                                | 270    | 261    | 254    | 248    | 243    | 238    | 234    | 230    | 227    | 224    | 221    | 218    | 216    |
| 36"             | 273    | 261                                | 252    | 243    | 236    | 230    | 225    | 220    | 216    | 212    | 209    | 206    | 203    | 200    | 198    |

|                 |        | 16 Gauge Deep-Dek® 6.0 Acoustical  |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------------|--------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sidelap Spacing |        | Span (ft), 12/2 Attachment Pattern |        |        |        |        |        |        |        |        |        |        |        |        |        |
| o/c             | 10'-0" | 11'-0"                             | 12'-0" | 13'-0" | 14'-0" | 15'-0" | 16'-0" | 17'-0" | 18'-0" | 19'-0" | 20'-0" | 21'-0" | 22'-0" | 23'-0" | 24'-0" |
| 6"              | 1253   | 1238                               | 1226   | 1215   | 1203   | 1192   | 1183   | 1175   | 1168   | 1161   | 1156   | 1150   | 1145   | 1141   | 1137   |
| 8"              | 980    | 965                                | 953    | 943    | 934    | 926    | 920    | 914    | 909    | 904    | 900    | 896    | 892    | 889    | 886    |
| 10"             | 816    | 801                                | 789    | 779    | 770    | 762    | 756    | 750    | 745    | 740    | 736    | 732    | 728    | 725    | 722    |
| 12"             | 707    | 692                                | 680    | 670    | 661    | 653    | 646    | 641    | 635    | 631    | 626    | 623    | 619    | 616    | 613    |
| 15"             | 597    | 583                                | 571    | 560    | 551    | 544    | 537    | 531    | 526    | 521    | 517    | 513    | 510    | 507    | 504    |
| 18"             | 524    | 510                                | 498    | 487    | 479    | 471    | 464    | 458    | 453    | 449    | 444    | 441    | 437    | 434    | 431    |
| 20"             | 488    | 473                                | 461    | 451    | 442    | 435    | 428    | 422    | 417    | 412    | 408    | 404    | 401    | 397    | 395    |
| 24"             | 433    | 419                                | 407    | 396    | 388    | 380    | 373    | 367    | 362    | 357    | 353    | 349    | 346    | 343    | 340    |
| 30"             | 379    | 364                                | 352    | 342    | 333    | 325    | 319    | 313    | 308    | 303    | 299    | 295    | 291    | 288    | 285    |
| 32"             | 365    | 350                                | 338    | 328    | 319    | 312    | 305    | 299    | 294    | 289    | 285    | 281    | 278    | 275    | 272    |
| 36"             | 342    | 328                                | 316    | 305    | 297    | 289    | 282    | 276    | 271    | 266    | 262    | 258    | 255    | 252    | 249    |

|                 |        | 14 Gauge Deep-Dek® 6.0 Acoustical  |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------------|--------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sidelap Spacing |        | Span (ft), 12/2 Attachment Pattern |        |        |        |        |        |        |        |        |        |        |        |        |        |
| o/c             | 10'-0" | 11'-0"                             | 12'-0" | 13'-0" | 14'-0" | 15'-0" | 16'-0" | 17'-0" | 18'-0" | 19'-0" | 20'-0" | 21'-0" | 22'-0" | 23'-0" | 24'-0" |
| 6"              | 1562   | 1544                               | 1525   | 1508   | 1493   | 1481   | 1470   | 1460   | 1451   | 1443   | 1436   | 1430   | 1424   | 1419   | 1414   |
| 8"              | 1220   | 1202                               | 1188   | 1175   | 1164   | 1155   | 1147   | 1139   | 1133   | 1127   | 1122   | 1117   | 1113   | 1109   | 1106   |
| 10"             | 1016   | 998                                | 983    | 970    | 959    | 950    | 942    | 935    | 928    | 922    | 917    | 913    | 908    | 904    | 901    |
| 12"             | 879    | 861                                | 846    | 834    | 823    | 814    | 805    | 798    | 792    | 786    | 781    | 776    | 772    | 768    | 764    |
| 15"             | 743    | 725                                | 710    | 697    | 686    | 677    | 669    | 662    | 655    | 649    | 644    | 640    | 635    | 631    | 628    |
| 18"             | 652    | 634                                | 619    | 606    | 595    | 586    | 578    | 571    | 564    | 558    | 553    | 549    | 544    | 540    | 537    |
| 20"             | 606    | 588                                | 573    | 561    | 550    | 541    | 532    | 525    | 519    | 513    | 508    | 503    | 499    | 495    | 491    |
| 24"             | 538    | 520                                | 505    | 492    | 482    | 472    | 464    | 457    | 450    | 445    | 440    | 435    | 431    | 427    | 423    |
| 30"             | 470    | 452                                | 437    | 424    | 413    | 404    | 396    | 389    | 382    | 376    | 371    | 367    | 362    | 358    | 355    |
| 32"             | 453    | 435                                | 420    | 407    | 396    | 387    | 379    | 372    | 365    | 359    | 354    | 350    | 345    | 341    | 338    |
| 36"             | 424    | 406                                | 391    | 379    | 368    | 359    | 350    | 343    | 337    | 331    | 326    | 321    | 317    | 313    | 309    |



Diaphragm design based on "Steel Deck Institute Diaphragm Design Manual, Third Edition". For diaphragm values of other roof deck assemblies, consult the SDI Diaphragm Design Manual or contact the Metal Dek Group™.  
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# DEEP-DEK® 6.0 ACOUSTICAL ALLOWABLE DIAPHRAGM SHEAR VALUES



#12x1-1/4" SUPPORT SCREWS AT SUPPORTS  
#10x3/4" SIDELAP SCREWS AT SIDELAPS

|                 |        | 20 Gauge Deep-Dek® 6.0 Acoustical  |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------------|--------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sidelap Spacing |        | Span (ft), 12/2 Attachment Pattern |        |        |        |        |        |        |        |        |        |        |        |        |        |
| o/c             | 10'-0" | 11'-0"                             | 12'-0" | 13'-0" | 14'-0" | 15'-0" | 16'-0" | 17'-0" | 18'-0" | 19'-0" | 20'-0" | 21'-0" | 22'-0" | 23'-0" | 24'-0" |
| 6"              | 758    | 751                                | 745    | 740    | 736    | 732    | 729    | 726    | 723    | 721    | 719    | 717    | 715    | 713    | 712    |
| 8"              | 630    | 622                                | 615    | 609    | 604    | 599    | 595    | 592    | 589    | 586    | 583    | 581    | 579    | 577    | 575    |
| 10"             | 542    | 533                                | 526    | 519    | 514    | 509    | 505    | 501    | 497    | 494    | 492    | 489    | 487    | 485    | 483    |
| 12"             | 466    | 459                                | 453    | 447    | 443    | 439    | 435    | 432    | 430    | 427    | 425    | 423    | 422    | 419    | 417    |
| 15"             | 389    | 382                                | 376    | 370    | 366    | 362    | 359    | 356    | 353    | 351    | 348    | 346    | 345    | 343    | 342    |
| 18"             | 338    | 331                                | 324    | 319    | 315    | 311    | 307    | 304    | 302    | 299    | 287    | 295    | 293    | 292    | 290    |
| 20"             | 312    | 305                                | 299    | 294    | 289    | 285    | 282    | 279    | 276    | 274    | 272    | 270    | 268    | 266    | 265    |
| 24"             | 274    | 267                                | 260    | 255    | 251    | 247    | 243    | 240    | 238    | 235    | 233    | 231    | 229    | 228    | 226    |
| 30"             | 236    | 228                                | 222    | 217    | 212    | 208    | 205    | 202    | 199    | 197    | 195    | 193    | 191    | 189    | 188    |
| 32"             | 226    | 219                                | 212    | 207    | 203    | 199    | 195    | 192    | 190    | 187    | 185    | 183    | 181    | 180    | 178    |
| 36"             | 210    | 203                                | 196    | 191    | 187    | 183    | 179    | 176    | 174    | 171    | 169    | 167    | 165    | 164    | 162    |

|                 |        | 18 Gauge Deep-Dek® 6.0 Acoustical  |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------------|--------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sidelap Spacing |        | Span (ft), 12/2 Attachment Pattern |        |        |        |        |        |        |        |        |        |        |        |        |        |
| o/c             | 10'-0" | 11'-0"                             | 12'-0" | 13'-0" | 14'-0" | 15'-0" | 16'-0" | 17'-0" | 18'-0" | 19'-0" | 20'-0" | 21'-0" | 22'-0" | 23'-0" | 24'-0" |
| 6"              | 1004   | 994                                | 987    | 980    | 974    | 969    | 965    | 961    | 958    | 954    | 952    | 949    | 947    | 945    | 943    |
| 8"              | 834    | 823                                | 814    | 806    | 799    | 793    | 788    | 784    | 779    | 776    | 773    | 770    | 767    | 764    | 762    |
| 10"             | 718    | 706                                | 696    | 688    | 680    | 674    | 668    | 663    | 659    | 655    | 651    | 648    | 645    | 642    | 640    |
| 12"             | 617    | 607                                | 599    | 592    | 586    | 581    | 577    | 573    | 569    | 566    | 563    | 560    | 558    | 555    | 553    |
| 15"             | 515    | 506                                | 497    | 490    | 484    | 479    | 475    | 471    | 467    | 464    | 461    | 459    | 456    | 454    | 452    |
| 18"             | 448    | 438                                | 430    | 423    | 417    | 411    | 407    | 403    | 399    | 396    | 393    | 391    | 388    | 386    | 384    |
| 20"             | 414    | 404                                | 396    | 389    | 383    | 378    | 373    | 369    | 366    | 362    | 359    | 357    | 355    | 352    | 350    |
| 24"             | 363    | 353                                | 345    | 338    | 332    | 327    | 322    | 318    | 315    | 311    | 309    | 306    | 304    | 302    | 300    |
| 30"             | 312    | 302                                | 294    | 287    | 281    | 276    | 271    | 267    | 264    | 261    | 258    | 255    | 253    | 251    | 249    |
| 32"             | 299    | 289                                | 281    | 274    | 268    | 263    | 259    | 255    | 251    | 248    | 245    | 242    | 240    | 238    | 236    |
| 36"             | 278    | 268                                | 260    | 253    | 247    | 242    | 237    | 233    | 230    | 227    | 224    | 221    | 219    | 217    | 215    |

|                 |        | 16 Gauge Deep-Dek® 6.0 Acoustical  |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------------|--------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sidelap Spacing |        | Span (ft), 12/2 Attachment Pattern |        |        |        |        |        |        |        |        |        |        |        |        |        |
| o/c             | 10'-0" | 11'-0"                             | 12'-0" | 13'-0" | 14'-0" | 15'-0" | 16'-0" | 17'-0" | 18'-0" | 19'-0" | 20'-0" | 21'-0" | 22'-0" | 23'-0" | 24'-0" |
| 6"              | 1266   | 1255                               | 1245   | 1236   | 1229   | 1223   | 1217   | 1212   | 1208   | 1204   | 1201   | 1197   | 1194   | 1192   | 1189   |
| 8"              | 1052   | 1038                               | 1027   | 1017   | 1008   | 1001   | 994    | 989    | 983    | 979    | 975    | 971    | 967    | 964    | 961    |
| 10"             | 906    | 891                                | 878    | 867    | 858    | 850    | 843    | 837    | 831    | 826    | 821    | 817    | 814    | 810    | 807    |
| 12"             | 779    | 766                                | 756    | 747    | 740    | 733    | 727    | 722    | 718    | 714    | 710    | 707    | 704    | 700    | 697    |
| 15"             | 650    | 638                                | 628    | 619    | 611    | 605    | 599    | 594    | 590    | 586    | 582    | 579    | 576    | 573    | 571    |
| 18"             | 565    | 552                                | 542    | 533    | 526    | 519    | 513    | 508    | 504    | 500    | 496    | 493    | 490    | 487    | 485    |
| 20"             | 522    | 509                                | 499    | 490    | 483    | 476    | 471    | 466    | 461    | 457    | 454    | 450    | 447    | 445    | 442    |
| 24"             | 458    | 445                                | 435    | 426    | 419    | 412    | 406    | 401    | 397    | 393    | 389    | 386    | 383    | 380    | 378    |
| 30"             | 394    | 381                                | 371    | 362    | 354    | 348    | 342    | 337    | 333    | 329    | 325    | 322    | 319    | 316    | 314    |
| 32"             | 377    | 365                                | 355    | 346    | 338    | 332    | 326    | 321    | 317    | 313    | 309    | 306    | 303    | 300    | 298    |
| 36"             | 351    | 338                                | 328    | 319    | 312    | 305    | 299    | 294    | 290    | 286    | 282    | 279    | 276    | 273    | 271    |

|                 |        | 14 Gauge Deep-Dek® 6.0 Acoustical  |        |        |        |        |        |        |        |        |        |        |        |        |        |
|-----------------|--------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Sidelap Spacing |        | Span (ft), 12/2 Attachment Pattern |        |        |        |        |        |        |        |        |        |        |        |        |        |
| o/c             | 10'-0" | 11'-0"                             | 12'-0" | 13'-0" | 14'-0" | 15'-0" | 16'-0" | 17'-0" | 18'-0" | 19'-0" | 20'-0" | 21'-0" | 22'-0" | 23'-0" | 24'-0" |
| 6"              | 1582   | 1567                               | 1555   | 1544   | 1535   | 1528   | 1521   | 1515   | 1509   | 1504   | 1500   | 1496   | 1492   | 1489   | 1486   |
| 8"              | 1314   | 1297                               | 1282   | 1270   | 1259   | 1250   | 1242   | 1235   | 1228   | 1223   | 1217   | 1213   | 1208   | 1204   | 1201   |
| 10"             | 1132   | 1113                               | 1097   | 1084   | 1072   | 1062   | 1053   | 1045   | 1038   | 1032   | 1026   | 1021   | 1016   | 1012   | 1008   |
| 12"             | 973    | 957                                | 944    | 933    | 924    | 916    | 909    | 902    | 897    | 892    | 887    | 883    | 880    | 875    | 871    |
| 15"             | 812    | 797                                | 784    | 773    | 764    | 755    | 748    | 742    | 736    | 731    | 727    | 723    | 719    | 716    | 713    |
| 18"             | 705    | 690                                | 677    | 665    | 657    | 648    | 641    | 635    | 629    | 625    | 620    | 616    | 612    | 609    | 606    |
| 20"             | 652    | 636                                | 623    | 613    | 603    | 595    | 588    | 582    | 576    | 571    | 567    | 562    | 559    | 555    | 552    |
| 24"             | 572    | 556                                | 543    | 532    | 523    | 515    | 508    | 501    | 496    | 491    | 486    | 482    | 479    | 475    | 472    |
| 30"             | 492    | 476                                | 463    | 452    | 443    | 435    | 428    | 421    | 416    | 411    | 406    | 402    | 398    | 395    | 392    |
| 32"             | 472    | 456                                | 443    | 432    | 423    | 415    | 407    | 401    | 396    | 391    | 386    | 382    | 378    | 375    | 372    |
| 36"             | 438    | 423                                | 410    | 399    | 389    | 381    | 374    | 368    | 362    | 357    | 353    | 349    | 345    | 342    | 338    |



Diaphragm design based on "Steel Deck Institute Diaphragm Design Manual, Third Edition". For diaphragm values of other roof deck assemblies, consult the SDI Diaphragm Design Manual or contact the Metal Dek Group™.  
All calculations are based on a "Single Span Condition". For "Multiple Spans", please contact the Metal Dek Group for additional information.