## Acute Dimensions

CALCULATED DIMENSIONS FOR MEASUREMENT OVER BALLS (Add or Subtract from Part Diameter)

Acute Angles $\left(90^{\circ}=\mathrm{a}^{\circ}\right)$

BALL DIAMETERS


| $a^{\circ}$ | . 0625 | . 1250 | . 2500 | . 3750 | . 5000 | . 6250 | . 7500 | . 8750 | 1.0000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\theta$ | . 1250 | . 2500 | . 5000 | . 7500 |  |  |  |  |  |
| 1 | . 1261 | . 2522 | . 5044 | $.7560$ | 1.0088 | 1.2500 1.2610 | 1.5000 1.5132 | 1.7500 1.7654 | 2.0000 |
| 2 | . 1272 | . 2544 | . 5088 | . 7633 | 1.0177 | 1.2722 | 1.5132 1.5266 | 1.7654 1.7810 | 2.0176 2.0355 |
| 3 | . 1283 | . 2567 | . 5134 | . 7701 | 1.0269 | 1.2836 | 1.5266 <br> 1.5403 <br> 1.5543 | 1.7810 1.7970 | 2.0355 2.0537 |
| 4 | . 1295 | . 2590 | . 5181 | . 7771 | 1.0362 | 1.2952 | 1.5543 | 1.8133 | 2.0724 |
| 5 | . 1307 | . 2614 | . 5228 | . 7842 | 1.0456 | 1.3070 | 1.5684 | 1:8298 | 2.0913 |
| 6 | . 1319 | . 2638 | . 5276 | . 7914 | 1.0553 | 1.3191 | 1.5829 | 1.8467 | 2.0913 2.1106 |
| 7 | . 1331 | . 2662 | . 5325 | . 7988 | 1.0651 | 1.3314 | 1.5977 | 1.8640 | 2.1106 2. 1303 |
| 8 | . 1344 | . 2688 | . 5376 | . 8064 | 1.0752 | 1.3440 | 1.6128 | 1.8816 | 2.1303 2.1504 |
| 9 | . 1356 | . 2713 | . 5427 | . 8140 | 1.0854 | 1.3567 | 1.6281 | 1.8994 | 2.1504 2.1708 |
| 10 | . 1369 | . 2739 | . 5479 | . 8219 | 1.0958 | 1.3698 | 1.6438 | 1.9177 | 2. 1917 |
| 11 | . 1383 | . 2766 | . 5532 | . 8299 | 1. 1065 | 1.3831 | 1.6598 | 1.9364 | 2.2131 |
| 12 | . 1396 | . 2793 | . 5587 | . 8380 | 1.1174 | 1.3968 | 1.6761 | 1.9555 | 2. 2349 |
| 13 | . 1410 | . 2821 | . 5643 | . 8464 | 1.1286 | 1.4107 | 1.6929 | 1.9755 | 2.2349 2.2572 |
| 14 | . 1425 | . 2849 | . 5699 | . 8549 | 1.1399 | 1.4249 | 1.7099 | 1.9949 | 2.2572 2.2799 |
| 15 | . 1439 | . 2879 | . 5758 | . 8637 | 1.1516 | 1.4395 | 1.7274 | 2.0153 | 2.2799 2.3032 |
| 16 | . 1454 | . 2908 | . 5817 | . 8726 | 1.1635 | 1.4543 | 1.7452 | 2.0361 | 2. 3270 |
| 17 | . 1469 | . 2939 | . 5878 | . 8817 | 1.1757 | 1.4696 | 1.7635 | 2.0574 | 2.3514 |
| 18 | . 1485 | . 2970 | . 5941 | . 8911 | 1.1882 | 1.4852 | 1.7823 | 2.0793 | 2.3764 |
| 19 | . 1501 | . 3002 | . 6004 | . 9007 | 1.2009 | 1.5012 | 1.8014 | 2.1017 | 2.4019 |
| 20 | . 1517 | . 3035 | . 6070 | . 9105 | 1.2140 | 1.5175 | 1.8211 | 2.1246 | 2.4281 |
| 21 | . 1534 | . 3068 | . 6137 | . 9206 | 1.2275 | 1.5343 | 1.8412 | 2.1481 | 2.4550 |
| 22 | . 1551 | . 3103 | . 6206 | . 9309 | 1.2413 | 1.5516 | 1.8619 | 2. 1722 | 2.4550 2.4826 |
| 23 | . 1569 | . 3138 | . 6277 | . 9415 | 1.2554 | 1.5692 | 1.8831 | 2.1722 2. 1969 | 2.4826 2.5108 |
| 24 | . 1587 | . 3174 | . 6349 | . 9524 |  |  | 1.9049 | 2. 2224 | 2.5108 |
| 25 | . 1606 | . 3212 | . 6424 | . 9636 | 1.2699 | 1.5874 1.6060 | 1.9049 1.9272 | 2. 2224 2. 2484 | 2.5399 2.5697 |
| 26 | . 1625 | . 3250 | . 6500 | . 9751 | 1.3001 | 1.6252 | 1.9502 | 2.2484 2.2752 | 2.5697 2.6003 |
| 27 | . 1644 | . 3289 | . 6579 | . 9869 | 1.3159 | 1.6449 | 1.9738 | 2.3028 | 2.6318 |
| 28 | . 1665 | . 3330 | . 6660 | . 9991 | 1.3321 | 1.6651 | 1.9982 | 2.3312 | 2.6643 |
| 29 | .1686 | . 3372 | . 6744 | 1.0116 | 1.3488 | 1.6860 | 2.0232 | 2.3604 | 2.6977 |
| 30 | .1707 | . 3415 | . 6830 | 1.0245 | 1.3660 | 1.7075 | 2.0490 | 2.3905 | 2.6977 2.7320 |
| 31 | . 1729 | . 3459 | . 6918 | 1.0378 | 1.3837 | 1.7296 | 2.0756 | 2.3915 2.4215 | 2.7320 2.7674 |
| 32 | . 1752 | . 3505 | . 7010 | 1.0515 | 1.4020 | 1.7525 | 2.0756 2.1030 | 2.4535 | 2.8674 2.8040 |
| 33 | . 1776 | . 3552 | . 7104 | 1.0656 | 1.4209 | 1.7761 | 2.1030 2.1313 | 2.4535 2.4865 | 2.8040 2.8418 |
| 34 | . 1800 | . 3600 | . 7201 | 1.0802 | 1.4403 | 1.8004 | 2.1605 | 2.5206 | 2.8807 |
| 35 | . 1825 | . 3651 | . 7302 | 1.0953 | 1.4605 | 1.8256 | 2. 1907 | 2.5558 | 2.9210 |
| 36 | . 1851 | . 3703 | . 7406 | 1.1109 | 1.4813 | 1.8516 | 2.2219 | 2.5922 | 2.9626 |
| 37 | . 1878 | . 3757 | . 7514 | 1.1271 | 1.5028 | 1.8785 | 2.2542 | 2.6299 | 3.0057 |
| 38 | . 1906 | . 3812 | . 7625 | 1.1438 | 1.5251 | 1.9064 | 2.2877 | 2.6690 |  |
| 39 | . 19ز5 | . 3870 | . 7741 | 1.1611 | 1.5482 | 1.9353 | 2.2877 2.3223 | 2.6690 2.7094 | 3.0503 3.0965 |
| 40 | . 1965 | . 3930 | . 7861 | 1.1791 | 1.5722 | 1.9653 | 2.3583 | 2.7514 | 3.0965 3.1445 |
| 41 | . 1996 | . 3992 | . 7985 | 1.1978 | 1.5971 | 1.9964 | 2.3957 | 2.7950 | 3.1445 3.1943 |
| 42 | . 2028 | . 4057 | . 8115 | 1.2172 | 1.6230 | 2.0287 | 2.4345 | 2.8402 | 3.2460 |
| 43 | . 2062 | . 4124 | . 8249 | 1.2374 | 1.6499 | 2.0623 | 2.4748 | 2.8873 | 3.2998 |
| 44 | . 2097 | . 4194 | . 8389 | 1.2584 | 1.6779 | 2.0973. | 2.5168 | 2.9363 | 3.3558 |
| 45 | .2133 | . 4267 | . 8535 | 1. 2803 | 1.7071 | 2.1338 | 2.5606 | 2.9874 | 3.4142 |

