



Table of Pitch Diameters and Gage Limits

| Nominal Size Threads Per Inch and Series | For Bolts & Screws Ring Thread Gages | | | | | Basic P.D. | For Nuts & Tapped Holes Plug Thread Gages | | | | |
|--|---|-------|-------|--------------------|-------|---------------|--|-------|-------|--------------------|---|
| | Unified Series | | | National Series | | | Unified Series | | | National Series | |
| | 1A | 2A | 3A | 2 | 3 | | 1B | 2B | 3B | 2 | 3 |
| 0 (.060)-80 NF | .0514 | .0519 | .0519 | .0519 | .0519 | .0519 | .0519 | .0519 | .0519 | .0519 | |
| | .0496 | .0506 | .0502 | .0506 | .0506 | | .0542 | .0536 | .0536 | .0532 | |
| 1 (.073)-64 NC | .0623 | .0629 | .0629 | .0629 | .0629 | .0629 | .0629 | .0629 | .0629 | .0629 | |
| | .0603 | .0614 | .0610 | .0615 | .0615 | | .0655 | .0648 | .0648 | .0643 | |
| 2 (.006)-56 NC | .0700 | .0744 | .0744 | .0744 | .0744 | .0744 | .0744 | .0744 | .0744 | .0744 | |
| | .0717 | .0728 | .0724 | .0729 | .0729 | | .0772 | .0765 | .0764 | .0759 | |
| 2 (.086)-64 NF | .0753 | .0759 | .0759 | .0759 | .0759 | .0759 | .0759 | .0759 | .0759 | .0759 | |
| | .0733 | .0744 | .0740 | .0745 | .0745 | | .0786 | .0779 | .0778 | .0773 | |
| 3 (.099)-56 NF | .0848 | .0855 | .0855 | .0855 | .0855 | .0855 | .0855 | .0855 | .0855 | .0855 | |
| | .0825 | .0838 | .0833 | .0839 | .0839 | | .0885 | .0877 | .0877 | .0871 | |
| 4 (.112)40 NC | .0950 | .0958 | .0958 | .0958 | .0958 | .0958 | .0958 | .0958 | .0958 | .0958 | |
| | .0925 | .0939 | .0934 | .0941 | .0941 | | .0991 | .0982 | .0982 | .0975 | |
| 4 (.112) -48 NF | .0975 | .0985 | .0985 | .0985 | .0985 | .0985 | .0985 | .0985 | .0985 | .0985 | |
| | .0954 | .0967 | .0963 | .0969 | .0969 | | .1016 | .1008 | .1007 | .1001 | |
| 5 (.125)-40 NC | .1080 | .1088 | .1088 | .1088 | .1088 | .1088 | .1088 | .1088 | .1088 | .1088 | |
| | .1054 | .1069 | .1064 | .1071 | .1071 | | .1121 | .1113 | .1112 | .1105 | |
| 5 (.125)-44 NF | .1095 | .1102 | .1102 | .1102 | .1102 | .1102 | .1102 | .1102 | .1102 | .1102 | |
| | .1070 | .1083 | .1079 | .1086 | .1086 | | .1134 | .1126 | .1125 | .1118 | |
| 6 (.138)-32 NC | .1169 | .1177 | .1177 | .1177 | .1177 | .1177 | .1177 | .1177 | .1177 | .1177 | |
| | .1141 | .1156 | .1150 | .1158 | .1158 | | .1214 | .1204 | .1204 | .1196 | |
| 6 (.138)-40 NF | .1210 | .1218 | .1218 | .1218 | .1218 | .1218 | .1218 | .1218 | .1218 | .1218 | |
| | .1184 | .1198 | .1194 | .1201 | .1201 | | .1252 | .1243 | .1242 | .1235 | |
| 8 (.164)-32 NC | .1428 | .1437 | .1437 | .1437 | .1437 | .1437 | .1437 | .1437 | .1437 | .1437 | |
| | .1399 | .1415 | .1410 | .1418 | .1418 | | .1475 | .1465 | .1464 | .1456 | |
| 8 (.164)-36 NF | .1452 | .1460 | .1460 | .1460 | .1460 | .1460 | .1460 | .1460 | .1460 | .1460 | |
| | .1424 | .1439 | .1435 | .1442 | .1442 | | .1496 | .1487 | .1485 | .1478 | |
| 10 (.190)-24 NC | .1619 | .1629 | .1629 | .1629 | .1629 | .1629 | .1629 | .1629 | .1629 | .1629 | |
| | .1586 | .1604 | .1696 | .1605 | .1605 | | .1672 | .1661 | .1662 | .1653 | |
| 10 (.190)-32 NF | .1688 | .1697 | .1697 | .1697 | .1697 | .1697 | .1697 | .1697 | .1697 | .1697 | |
| | .1658 | .1674 | .1670 | .1678 | .1678 | | .1736 | .1726 | .1724 | .1716 | |
| 12 (.216)-24 NC | .1879 | .1889 | .1889 | .1889 | .1889 | .1889 | .1889 | .1889 | .1889 | .1889 | |
| | .1845 | .1863 | .1856 | .1865 | .1865 | | .1933 | .1922 | .1922 | .1913 | |
| 12 (.216)-28 NF | .1918 | .1928 | .1928 | .1928 | .1928 | .1928 | .1928 | .1928 | .1928 | .1928 | |
| | .1886 | .1904 | .1897 | .1906 | .1906 | | .1970 | .1959 | .1959 | .1950 | |
| 12 (.216)-32 NEF | .1948 | .1957 | .1957 | .1957 | .1957 | .1957 | .1957 | .1957 | .1957 | .1957 | |
| | .1917 | .1933 | .1926 | .1935 | .1935 | | .1998 | .1998 | .1998 | .1979 | |
| 1/4"-20 NC | .2164 | .2164 | .2175 | .2175 | .2175 | .2175 | .2175 | .2175 | .2175 | .2175 | |
| | .2108 | .2127 | .2147 | .2139 | .2149 | | .2248 | .2224 | .2211 | .2211 | |
| 1/4"-28 NF | .2258 | .2258 | .2268 | .2268 | .2268 | .2268 | .2268 | .2268 | .2268 | .2268 | |
| | .2208 | .2225 | .2243 | .2237 | .2246 | | .2333 | .2311 | .2300 | .2299 | |
| 1/4"-32 NEF | .2287 | .2297 | .2297 | .2297 | .2297 | .2297 | .2297 | .2297 | .2297 | .2297 | |
| | .2255 | .2273 | .2265 | .2275 | .2275 | | .2339 | .2328 | .2329 | .2319 | |
| 5/16"-18 NC | .2752 | .2752 | .2764 | .2764 | .2764 | .2764 | .2764 | .2764 | .2764 | .2764 | |
| | .2691 | .2712 | .2734 | .2723 | .2734 | | .2843 | .2817 | .2803 | .2805 | |
| 5/16"-24 NF | .2843 | .2943 | .2854 | .2854 | .2854 | .2854 | .2854 | .2854 | .2854 | .2854 | |
| | .2788 | .2806 | .2827 | .2821 | .2830 | | .2925 | .2902 | .2890 | .2887 | |
| 5/16"-32 NEF | .2912 | .2922 | .2922 | .2922 | .2922 | .2922 | .2922 | .2922 | .2922 | .2922 | |
| | .2880 | .2898 | .2889 | .2899 | .2899 | | .2964 | .2953 | .2955 | .2945 | |
| 3/8"-16 NC | .3331 | .3331 | .3344 | .3344 | .3344 | .3344 | .3344 | .3344 | .3344 | .3344 | |
| | .3266 | .3287 | .3311 | .3299 | .3312 | | .3429 | .3401 | .3387 | .3389 | |
| 3/8"-24 NF | .3468 | .3468 | .3479 | .3479 | .3479 | .3479 | .3479 | .3479 | .3479 | .3479 | |
| | .3411 | .3430 | .3450 | .3446 | .3455 | | .3553 | .3528 | .3516 | .3512 | |
| 3/8"-28 NEF | .3537 | .3547 | .3547 | .3547 | .3547 | .3547 | .3547 | .3547 | .3547 | .3547 | |
| | .3503 | .3522 | .3513 | .3523 | .3523 | | .3591 | .3580 | .3581 | .3571 | |
| 7/16"-14 NC | .3897 | .3897 | .3911 | .3911 | .3911 | .3911 | .3911 | .3911 | .3911 | .3911 | |
| | .3826 | .3850 | .3876 | .3862 | .3875 | | .4003 | .3972 | .3957 | .3960 | |
| 7/16"-20 NF | .4037 | .4037 | .4050 | .4050 | .4050 | .4050 | .4050 | .4050 | .4050 | .4050 | |
| | .3975 | .3995 | .4019 | .4014 | .4042 | | .4131 | .4104 | .4091 | .4086 | |
| 7/16"-28 NEF | .4132 | .4143 | .4143 | .4143 | .4143 | .4143 | .4143 | .4143 | .4143 | .4143 | |
| | .4110 | .4116 | .4107 | .4118 | .4118 | | .4189 | .4178 | .4179 | .4168 | |
| 1/2"-13 NC | .4485 | .4485 | .4500 | .4500 | .4500 | .4500 | .4500 | .4500 | .4500 | .4500 | |
| | .4411 | .4435 | .4463 | .4448 | .4463 | | .4597 | .4565 | .4548 | .4552 | |
| 1/2"-20 NF | .4662 | .4662 | .4675 | .4675 | .4675 | .4675 | .4675 | .4675 | .4675 | .4675 | |
| | .4598 | .4619 | .4643 | .4639 | .4649 | | .4759 | .4731 | .4717 | .4711 | |
| 1/2"-28 NEF | .4757 | .4768 | .4768 | .4768 | .4768 | .4768 | .4768 | .4768 | .4768 | .4768 | |
| | .4720 | .4740 | .4731 | .4742 | .4742 | | .4816 | .4804 | .4805 | .4794 | |



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|--|---|--------|--------|--------------------|--------|---------------|--|--------|--------|--------------------|---|
| | Unified Series | | | National Series | | | Unified Series | | | National Series | |
| | 1A | 2A | 3A | 2 | 3 | | 1B | 2B | 3B | 2 | 3 |
| 9/16" -12 NC | .5068 | .5068 | .5084 | .5084 | .5084 | .5084 | .5084 | .5084 | .5084 | .5084 | |
| | .4990 | .5016 | .5045 | .5028 | .5044 | .5084 | .5186 | .5152 | .5135 | .5140 .5124 | |
| 9/16" -18 NF | .5250 | .5250 | .5264 | .5264 | .5264 | .5264 | .5264 | .5264 | .5264 | .5264 | |
| | .5182 | .5205 | .5230 | .5223 | .5234 | .5264 | .5353 | .5323 | .5308 | .5305 .5294 | |
| 9/16" -24 NEF | | .5342 | .5354 | .5354 | .5354 | .5354 | | .5354 | .5354 | .5354 | |
| | | .5303 | .5325 | .5314 | .5326 | .5354 | | .5405 | .5392 | .5394 .5382 | |
| 5/8" - 11 NC | .5644 | .5644 | .5660 | .5660 | .5660 | .5660 | .5660 | .5660 | .5660 | .5660 | |
| | .5561 | .5589 | .5619 | .5601 | .5618 | .5660 | .5767 | .5732 | .5714 | .5719 .5702 | |
| 5/8" - 18 NF | .5875 | .5875 | .5889 | .5889 | .5889 | .5889 | .5889 | .5889 | .5889 | .5889 | |
| | .5805 | .5828 | .5854 | .5848 | .5859 | .5889 | .5980 | .5934 | .5934 | .5930 .5919 | |
| 5/8" - 24 NEF | | .5667 | .5979 | .5979 | .5979 | .5979 | | .5979 | .5979 | .5979 | |
| | | .5927 | .5949 | .5938 | .5950 | .5979 | | .6031 | .6018 | .6020 .6008 | |
| 11/16" - 24 NEF | | .6592 | .6604 | .6604 | .6604 | .6604 | | .6604 | .6604 | .6604 | |
| | | .6552 | .6574 | .6563 | .6575 | .6604 | | .6656 | .6643 | .6645 .6633 | |
| 3/4" - 10 NC | .6832 | .6832 | .6850 | .6850 | .6850 | .6850 | .6850 | .6850 | .6850 | .6850 | |
| | .6744 | .6773 | .6806 | .6786 | .6805 | .6850 | .6965 | .6927 | .6907 | .6914 .6895 | |
| 3/4" - 16 NF | .7079 | .7079 | .7094 | .7094 | .7094 | .7094 | .7094 | .7094 | .7094 | .7094 | |
| | .7004 | .7029 | .7056 | .7049 | .7062 | .7094 | .7192 | .7159 | .7143 | .7139 .7126 | |
| 3/4" - 20 NEF | | .7162 | .7175 | .7175 | .7175 | .7175 | | .7175 | .7175 | .7175 | |
| | | .7118 | .7142 | .7129 | .7143 | .7175 | | .7232 | .7218 | .7221 .7207 | |
| 13/16" - 20 NEF | | .7787 | .7800 | .7800 | .7800 | .7800 | | .7800 | .7800 | .7800 | |
| | | .7743 | .7767 | .7754 | .7768 | .7800 | | .7857 | .7843 | .7846 .7832 | |
| 7/8" - 9 NC | .8009 | .8009 | .8028 | .8028 | .8028 | .8028 | .8028 | .8028 | .8028 | .8028 | |
| | .7914 | .7946 | .7981 | .7958 | .7979 | .8028 | .8110 | .8089 | .8089 | .8098 .8077 | |
| 7/8" - 14 NF | .8270 | .8270 | .8286 | .8286 | .8286 | .8286 | .8286 | .8286 | .8286 | .8286 | |
| | .8189 | .8216 | .8245 | .8237 | .8250 | .8286 | .8392 | .8356 | .8339 | .8335 .8322 | |
| 7/8" - 20 NEF | | .8412 | .8425 | .8425 | .8425 | .8425 | | .8425 | .8425 | .8425 | |
| | | .8368 | .8392 | .8378 | .8392 | .8425 | | .8482 | .8468 | .8472 .8458 | |
| 15/16" - 20 NEF | | .9036 | .9050 | .9050 | .9050 | .9050 | | .9050 | .9050 | .9050 | |
| | | .8991 | .9016 | .9003 | .9017 | .9050 | | .9109 | .9094 | .9097 .9083 | |
| 1" - 8 NC | .9168 | .9168 | .9188 | .9188 | .9188 | .9188 | .9188 | .9188 | .9188 | .9188 | |
| | .9067 | .9100 | .9137 | .9112 | .9134 | .9188 | .9320 | .9276 | .9254 | .9264 .9242 | |
| 1" - 12 UNF | .9441 | .9441 | .9459 | .9459 | .9459 | .9459 | .9459 | .9459 | .9459 | .9459 | |
| | .9353 | .9382 | .9415 | .9403 | .9419 | .9459 | .9573 | .9535 | .9516 | .9515 .9499 | |
| 1" - 20 NEF | | .9691 | .9675 | .9675 | .9675 | .9675 | | .9675 | .9675 | .9675 | |
| | | .9616 | .9641 | .9627 | .9641 | .9675 | | .9734 | .9719 | .9723 .9609 | |
| 11/16" - 18 NEF | | 1.0250 | 1.0264 | 1.0264 | 1.0264 | 1.0264 | | 1.0264 | 1.0264 | 1.0264 | |
| | | 1.0203 | 1.0228 | 1.0213 | 1.0228 | 1.0264 | | 1.0326 | 1.0310 | 1.0315 .1.0300 | |
| 1-1/8" - 7 NC | 1.0330 | 1.0300 | 1.0322 | 1.0322 | 1.0322 | 1.0322 | 1.0322 | 1.0322 | 1.0322 | 1.0322 | |
| | 1.0191 | 1.0228 | 1.0268 | 1.0237 | 1.0263 | 1.0322 | 1.0463 | 1.0416 | 1.0393 | 1.0407 .1.0381 | |
| 1-1/8" - 12 NF | 1.0691 | 1.0691 | 1.0709 | 1.0709 | 1.0709 | 1.0709 | 1.0709 | 1.0709 | 1.0709 | 1.0709 | |
| | 1.0601 | 1.0631 | 1.0664 | 1.0653 | 1.0669 | 1.0709 | 1.0826 | 1.0787 | 1.0768 | 1.0765 .1.0749 | |
| 1-1/8" - 18 NEF | | 1.0875 | 1.0889 | 1.0889 | 1.0889 | 1.0889 | | 1.0889 | 1.0889 | 1.0889 | |
| | | 1.0828 | 1.0853 | 1.0837 | 1.0853 | 1.0889 | | 1.0957 | 1.0935 | 1.0941 .1.0925 | |
| 1-3/16" - 18 NEF | | 1.1499 | 1.1514 | 1.1514 | 1.1514 | 1.1514 | | 1.1514 | 1.1514 | 1.1514 | |
| | | 1.1450 | 1.1478 | 1.1462 | 1.1478 | 1.1514 | | 1.1577 | 1.1561 | 1.1566 .1.1550 | |
| 1-1/4" - 7 NC | 1.1550 | 1.1550 | 1.1572 | 1.1572 | 1.1572 | 1.1572 | 1.1572 | 1.1572 | 1.1572 | 1.1572 | |
| | 1.1439 | 1.1476 | 1.1517 | 1.1487 | 1.1513 | 1.1572 | 1.1716 | 1.1668 | 1.1644 | 1.1657 .1.1631 | |
| 1-1/4" - 12 NF | 1.1941 | 1.1941 | 1.1959 | 1.1959 | 1.1959 | 1.1959 | 1.1959 | 1.1959 | 1.1959 | 1.1959 | |
| | 1.1849 | 1.1979 | 1.1913 | 1.1903 | 1.1919 | 1.1959 | 1.2079 | 1.2039 | 1.2019 | 1.2015 .1.1999 | |
| 1-1/4" - 18 NEF | | 1.2124 | 1.2139 | 1.2139 | 1.2139 | 1.2139 | | 1.2139 | 1.2139 | 1.2139 | |
| | | 1.2075 | 1.2103 | 1.2086 | 1.2102 | 1.2139 | | 1.2202 | 1.2186 | 1.2192 .1.2176 | |
| 1-5/16" - 18 NEF | | 1.2749 | 1.2764 | 1.2764 | 1.2764 | 1.2764 | | 1.2764 | 1.2764 | 1.2764 | |
| | | 1.2700 | 1.2728 | 1.2711 | 1.2727 | 1.2764 | | 1.2827 | 1.2811 | 1.2817 .1.2801 | |
| 1-3/8" - 6 NC | 1.2643 | 1.2643 | 1.2667 | 1.2667 | 1.2667 | 1.2667 | 1.2667 | 1.2667 | 1.2667 | 1.2667 | |
| | 1.2523 | 1.2663 | 1.2607 | 1.2566 | 1.2596 | 1.2667 | 1.2822 | 1.2771 | 1.2745 | 1.2768 .1.2738 | |
| 1-3/8" - 12 NF | 1.3190 | 1.3190 | 1.3209 | 1.3209 | 1.3209 | 1.3209 | 1.3209 | 1.3209 | 1.3209 | 1.3209 | |
| | 1.3096 | 1.3127 | 1.3162 | 1.3153 | 1.3169 | 1.3209 | 1.3332 | 1.3291 | 1.2370 | 1.3265 .1.3249 | |
| 1-3/8" - 18 NEF | | 1.3374 | 1.3389 | 1.3389 | 1.3389 | 1.3389 | | 1.3389 | 1.3389 | 1.3389 | |
| | | 1.3325 | 1.3353 | 1.3335 | 1.3351 | 1.3389 | | 1.3452 | 1.3436 | 1.3443 .1.3427 | |
| 1-7/16" - 18 NEF | | 1.3999 | 1.4014 | 1.4014 | 1.4014 | 1.4014 | | 1.4014 | 1.4014 | 1.4014 | |
| | | 1.3949 | 1.3977 | 1.3960 | 1.3976 | 1.4014 | | 1.4079 | 1.4062 | 1.4068 .1.4052 | |
| 1-1/2" - 6 NC | 1.3893 | 1.3893 | 1.3917 | 1.3917 | 1.3917 | 1.3917 | 1.3917 | 1.3917 | 1.3917 | 1.3917 | |
| | 1.3772 | 1.3812 | 1.3856 | 1.3816 | 1.3846 | 1.3917 | 1.4075 | 1.4022 | 1.3996 | 1.4018 .1.3988 | |
| 1-1/2" - 12 NF | 1.4440 | 1.4440 | 1.4459 | 1.4459 | 1.4459 | 1.4459 | 1.4459 | 1.4459 | 1.4459 | 1.4459 | |
| | 1.4344 | 1.4376 | 1.4411 | 1.4403 | 1.4419 | 1.4459 | 1.4584 | 1.4542 | 1.4522 | 1.4515 .1.4499 | |
| 1-1/2" - 18 NEF | | 1.4624 | 1.4639 | 1.4639 | 1.4639 | 1.4639 | | 1.4639 | 1.4639 | 1.4639 | |
| | | 1.4574 | 1.4602 | 1.4584 | 1.4601 | 1.4639 | | 1.4704 | 1.4687 | 1.4694 .1.4677 | |