



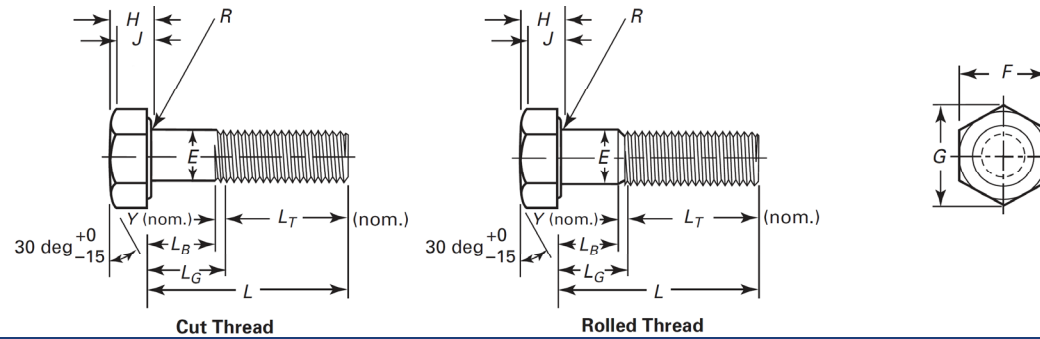
Hex Head Cap Screws Dimensioning Table



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| Nominal Size or Basic Product Diameter | E | | F | | | G | | H | | | J Minimum Wrenching Height | Thread Length for Screw Lengths, L_T | | Y Transition Thread Length | Maximum Total Runout of Bearing Surface FIM | |
|--|---------------|--------|--------------------|---------|-------|----------------------|-------|-------------|---------|-------|-------------------------------|--|------------|-------------------------------|---|-------|
| | Body Diameter | | Width Across Flats | | | Width Across Corners | | Head Height | | | | 6 in. & Shorter | Over 6 in. | | | |
| | Max. | Min. | Basic | Max. | Min. | Max. | Min. | Basic | Max. | Min. | | | | | | |
| 1/4 | 0.2500 | 0.2500 | 0.2450 | 7/16 | 0.438 | 0.428 | 0.505 | 0.488 | 5/32 | 0.163 | 0.150 | 0.106 | 0.750 | 1.000 | 0.250 | 0.010 |
| 5/16 | 0.3125 | 0.3125 | 0.3065 | 1/2 | 0.500 | 0.489 | 0.577 | 0.557 | 13/64 | 0.211 | 0.195 | 0.140 | 0.875 | 1.125 | 0.278 | 0.011 |
| 3/8 | 0.3750 | 0.3750 | 0.3690 | 9/16 | 0.562 | 0.551 | 0.650 | 0.628 | 15/64 | 0.243 | 0.226 | 0.160 | 1.000 | 1.250 | 0.312 | 0.012 |
| 7/16 | 0.4375 | 0.4375 | 0.4305 | 5/8 | 0.625 | 0.612 | 0.722 | 0.698 | 9/32 | 0.291 | 0.272 | 0.195 | 1.125 | 1.375 | 0.357 | 0.013 |
| 1/2 | 0.5000 | 0.5000 | 0.4930 | 3/4 | 0.750 | 0.736 | 0.866 | 0.840 | 5/16 | 0.323 | 0.302 | 0.215 | 1.250 | 1.500 | 0.385 | 0.014 |
| 9/16 | 0.5625 | 0.5625 | 0.5545 | 13/16 | 0.812 | 0.798 | 0.938 | 0.910 | 23/64 | 0.371 | 0.348 | 0.250 | 1.375 | 1.625 | 0.417 | 0.015 |
| 5/8 | 0.6250 | 0.6250 | 0.6170 | 15/16 | 0.938 | 0.922 | 1.083 | 1.051 | 25/64 | 0.403 | 0.378 | 0.269 | 1.500 | 1.750 | 0.455 | 0.017 |
| 3/4 | 0.7500 | 0.7500 | 0.7410 | 1-1/8 | 1.125 | 1.100 | 1.299 | 1.254 | 15/32 | 0.483 | 0.455 | 0.324 | 1.750 | 2.000 | 0.500 | 0.020 |
| 7/8 | 0.8750 | 0.8750 | 0.8660 | 1-5/16 | 1.312 | 1.285 | 1.516 | 1.465 | 35/64 | 0.563 | 0.531 | 0.378 | 2.000 | 2.250 | 0.556 | 0.023 |
| 1 | 1.0000 | 1.0000 | 0.9900 | 1-1/2 | 1.500 | 1.469 | 1.732 | 1.675 | 39/64 | 0.627 | 0.591 | 0.416 | 2.250 | 2.500 | 0.625 | 0.026 |
| 1-1/8 | 1.1250 | 1.1250 | 1.1140 | 1-11/16 | 1.688 | 1.631 | 1.949 | 1.859 | 11/16 | 0.718 | 0.658 | 0.461 | 2.500 | 2.750 | 0.714 | 0.029 |
| 1-1/4 | 1.2500 | 1.2500 | 1.2390 | 1-7/8 | 1.875 | 1.812 | 2.165 | 2.066 | 25/32 | 0.813 | 0.749 | 0.530 | 2.750 | 3.000 | 0.714 | 0.033 |
| 1-3/8 | 1.3750 | 1.3750 | 1.3630 | 2-1/16 | 2.062 | 1.994 | 2.382 | 2.273 | 27/32 | 0.878 | 0.810 | 0.569 | 3.000 | 3.250 | 0.833 | 0.036 |
| 1-1/2 | 1.5000 | 1.5000 | 1.4880 | 2-1/4 | 2.250 | 2.175 | 2.598 | 2.480 | 15/16 | 0.974 | 0.902 | 0.640 | 3.250 | 3.500 | 0.833 | 0.039 |
| 1-5/8 | 1.6250 | 1.6250 | 1.6130 | 2-7/16 | 2.438 | 2.356 | 2.815 | 2.686 | 1 | 1.038 | 0.962 | 0.694 | 3.500 | 3.750 | 0.909 | 0.043 |
| 1-3/4 | 1.7500 | 1.7500 | 1.7380 | 2-5/8 | 2.625 | 2.538 | 3.031 | 2.893 | 1-3/32 | 1.134 | 1.054 | 0.748 | 3.750 | 4.000 | 1.000 | 0.046 |
| 1-7/8 | 1.8750 | 1.8750 | 1.8630 | 2-13/16 | 2.812 | 2.719 | 3.248 | 3.099 | 1-5/32 | 1.198 | 1.114 | 0.802 | 4.000 | 4.250 | 1.000 | 0.049 |
| 2 | 2.0000 | 2.0000 | 1.9880 | 3 | 3.000 | 2.900 | 3.464 | 3.306 | 1-7/32 | 1.263 | 1.175 | 0.825 | 4.250 | 4.500 | 1.111 | 0.052 |
| 2-1/4 | 2.2500 | 2.2500 | 2.2380 | 3-3/8 | 3.375 | 3.262 | 3.897 | 3.719 | 1-3/8 | 1.423 | 1.327 | 0.933 | ... | 5.000 | 1.111 | 0.059 |
| 2-1/2 | 2.5000 | 2.5000 | 2.4880 | 3-3/4 | 3.750 | 3.625 | 4.330 | 4.133 | 1-17/32 | 1.583 | 1.479 | 1.042 | ... | 5.500 | 1.250 | 0.065 |
| 2-3/4 | 2.7500 | 2.7500 | 2.7380 | 4-1/8 | 4.125 | 3.988 | 4.763 | 4.546 | 1-11/16 | 1.744 | 1.632 | 1.151 | ... | 6.000 | 1.250 | 0.072 |
| 3 | 3.0000 | 3.0000 | 2.9880 | 4-1/2 | 4.500 | 4.350 | 5.196 | 4.959 | 1-7/8 | 1.935 | 1.815 | 1.290 | ... | 6.500 | 1.250 | 0.079 |

Notes: (1) All Dimensions are in inches. (2) L is the nominal bolt length. For common nominal sizes, hex head cap screws are typically stocked in 1/8" increments up to 1" long, in 1/4" increments from 1" to 6" long & in 1/2" increments from 6" to 10" long. (3) L_G is the grip gaging length. $L_{G\ Max}$ is calculated by using $L_{G\ Max} = L - L_T$. For more details see our Minimum Body Length v. Maximum Grip Gaging Length Table, or see ASME B18.2.1 2012.