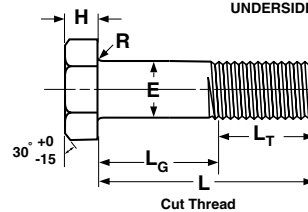
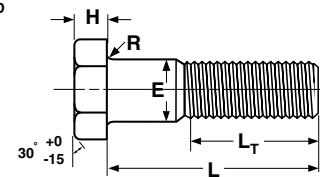


UNDERSIDE OF HEAD



Cut Thread



Rolled Thread

Heavy Hex & Structural Bolts

A449 Heavy Hex Bolts

| Nominal Size or Basic Product Diameter | | E | | F | | | G | | H | | | R | | L _T | |
|--|--------|-----------|-------|--------------------|-------|-------|----------------------|-------|-------------|-------|-------|------------------|------|--------------------------------|------------|
| | | Body Diam | | Width Across Flats | | | Width Across Corners | | Head Height | | | Radius of Fillet | | Thread Length for Bolt Lengths | |
| | | Max | Min | Basic | Max | Min | Max | Min | Basic | Max | Min | Max | Min | 6 in. and shorter | Over 6 in. |
| 1/2 | 0.5000 | 0.515 | 0.482 | 7/8 | 0.875 | 0.850 | 1.010 | 0.969 | 11/32 | 0.364 | 0.302 | 0.03 | 0.01 | 1.250 | 1.500 |
| 5/8 | 0.6250 | 0.642 | 0.605 | 1-1/16 | 1.062 | 1.031 | 1.227 | 1.175 | 27/64 | 0.444 | 0.378 | 0.06 | 0.02 | 1.500 | 1.750 |
| 3/4 | 0.7500 | 0.768 | 0.729 | 1-1/4 | 1.250 | 1.212 | 1.443 | 1.383 | 1/2 | 0.524 | 0.455 | 0.06 | 0.02 | 1.750 | 2.000 |
| 7/8 | 0.8750 | 0.895 | 0.852 | 1-7/16 | 1.438 | 1.394 | 1.660 | 1.589 | 37/64 | 0.604 | 0.531 | 0.06 | 0.02 | 2.000 | 2.250 |
| 1 | 1.0000 | 1.022 | 0.976 | 1-5/8 | 1.625 | 1.575 | 1.876 | 1.796 | 43/64 | 0.700 | 0.591 | 0.09 | 0.03 | 2.250 | 2.500 |
| 1 1/8 | 1.1250 | 1.149 | 1.098 | 1-13/16 | 1.812 | 1.756 | 2.093 | 2.002 | 3/4 | 0.780 | 0.658 | 0.09 | 0.03 | 2.500 | 2.750 |
| 1 1/4 | 1.2500 | 1.277 | 1.223 | 2 | 2.000 | 1.938 | 2.309 | 2.209 | 27/32 | 0.876 | 0.749 | 0.09 | 0.03 | 2.750 | 3.000 |
| 1 3/8 | 1.3750 | 1.404 | 1.345 | 2-3/16 | 2.188 | 2.119 | 2.526 | 2.416 | 29/32 | 0.940 | 0.810 | 0.09 | 0.03 | 3.000 | 3.250 |
| 1 1/2 | 1.5000 | 1.531 | 1.470 | 2-3/8 | 2.375 | 2.300 | 2.742 | 2.622 | 1 | 1.036 | 0.902 | 0.09 | 0.03 | 3.250 | 3.500 |
| 1 3/4 | 1.7500 | 1.785 | 1.716 | 2-3/4 | 2.750 | 2.662 | 3.175 | 3.035 | 1-5/32 | 1.196 | 1.054 | 0.12 | 0.04 | 3.750 | 4.000 |
| 2 | 2.0000 | 2.039 | 1.964 | 3-1/8 | 3.125 | 3.025 | 3.608 | 3.449 | 1-11/32 | 1.388 | 1.175 | 0.12 | 0.04 | 4.250 | 4.500 |
| 2 1/4 | 2.2500 | 2.305 | 2.214 | 3-1/2 | 3.500 | 3.388 | 4.041 | 3.862 | 1-1/2 | 1.548 | 1.327 | 0.19 | 0.06 | 4.750 | 5.000 |
| 2 1/2 | 2.5000 | 2.559 | 2.461 | 3-7/8 | 3.875 | 3.750 | 4.474 | 4.275 | 1-21/32 | 1.708 | 1.479 | 0.19 | 0.06 | 5.250 | 5.500 |
| 2 3/4 | 2.7500 | 2.827 | 2.711 | 4-1/4 | 4.250 | 4.112 | 4.907 | 4.688 | 1-13/16 | 1.869 | 1.632 | 0.19 | 0.06 | 5.750 | 6.000 |
| 3 | 3.0000 | 3.081 | 2.961 | 4-5/8 | 4.625 | 4.475 | 5.340 | 5.102 | 2 | 2.060 | 1.815 | 0.19 | 0.06 | 6.250 | 6.500 |

| Tolerance on Length | Nominal Screw Size | Nominal Screw Length | | | | | | | | | |
|---------------------|--------------------|----------------------|-------|--------------------------------|-------|--------------------------------|-------|----------------------------|-------|-------------------|-------|
| | | Up to 1 in., incl. | | Over 1 in. to 2 1/2 in., incl. | | Over 2 1/2 in. to 4 in., incl. | | Over 4 in. to 6 in., incl. | | Longer than 6 in. | |
| | 1/4 to 3/8 | +0.02 | -0.03 | +0.02 | -0.04 | +0.04 | -0.06 | +0.06 | -0.10 | +0.10 | -0.18 |
| 7/16 and 1/2 | +0.02 | -0.03 | +0.04 | -0.06 | +0.06 | -0.08 | +0.08 | -0.10 | +0.12 | -0.18 | |
| 9/16 to 3/4 | +0.02 | -0.03 | +0.06 | -0.08 | +0.08 | -0.10 | +0.10 | -0.10 | +0.14 | -0.18 | |
| 7/8 and 1 | | | +0.08 | -0.10 | +0.10 | -0.14 | +0.12 | -0.16 | +0.16 | -0.20 | |
| 1 1/8 to 1 1/2 | | | +0.12 | -0.12 | +0.16 | -0.16 | +0.18 | -0.18 | +0.22 | -0.22 | |
| Over 1-1/2 | | | +0.18 | -0.18 | +0.20 | -0.20 | +0.22 | -0.22 | +0.24 | -0.24 | |

ASME B18.2.1-1996

The length of a hex bolt is measured from the underhead bearing surface to the extreme end of the bolt.

The value-added source for quality bolts, screws, nuts, washers and other industrial fasteners.

3211 West 9th Street, Trainer, PA 19061-5242 TOLL FREE: 1-800-662-7459 LOCAL: 610-485-5700 FAX: 610-485-5877

E-MAIL: sales@coburnmyers.com