



BOLT TORQUE SPECIFICATIONS

The below estimated torque calculations are only offered as a guide. Use of its content by anyone is the sole responsibility of that person and they assume all risk. Due to many variables that affect the torque-tension relationship like human error, surface texture, and lubrication the only way to determine the correct torque is through experimentation under actual joint and assembly conditions.

| STANDARD STEEL BOLT TORQUE SPECIFICATIONS | | | | | | | |
|--|---------------------|---|---|---|---|---|---|
| STANDARD DRY TORQUE IN FOOT-POUNDS | | | | | | | |
| Bolt Size (inches) | Course Threads/Inch | SAE Grade 0-1-2 74,000 psi Low Carbon Steel | SAE Grade 3 100,000 psi Med. Carbon Steel | SAE Grade 5 120,000 psi Med. Carbon Heat T. Steel | SAE Grade 6 133,000 psi Med. Carbon Temp. Steel | SAE Grade 7 133,000 psi Med. Carbon Alloy Steel | SAE Grade 8 150,000 psi Med. Carbon Alloy Steel |
| 1/4 | 20 | 6 | 9 | 10 | 12.5 | 13 | 14 |
| 5/16 | 18 | 12 | 17 | 19 | 24 | 25 | 29 |
| 3/8 | 16 | 20 | 30 | 33 | 43 | 44 | 47 |
| 7/16 | 14 | 32 | 47 | 54 | 69 | 71 | 78 |
| 1/2 | 13 | 47 | 69 | 78 | 106 | 110 | 119 |
| 9/16 | 12 | 69 | 103 | 114 | 150 | 154 | 169 |
| 5/8 | 11 | 96 | 145 | 154 | 209 | 215 | 230 |
| 3/4 | 10 | 155 | 234 | 257 | 350 | 360 | 380 |
| 7/8 | 9 | 206 | 372 | 382 | 550 | 570 | 600 |
| 1 | 8 | 310 | 551 | 587 | 825 | 840 | 700 |
| 1-1/8 | 7 | 480 | 872 | 794 | 1304 | 1325 | 1430 |
| 1-1/4 | 7 | 375 | 1211 | 1105 | 1815 | 1825 | 1975 |
| 1-3/8 | 6 | 900 | 1624 | 1500 | 2434 | 2500 | 2650 |
| 1-1/2 | 6 | 1100 | 1943 | 1775 | 2913 | 3000 | 3200 |
| 1-5/8 | 5.5 | 1470 | 2660 | 2425 | 3985 | 4000 | 4400 |
| 1-3/4 | 5 | 1900 | 3463 | 3150 | 5189 | 5300 | 5650 |
| 1-7/8 | 5 | 2360 | 4695 | 4200 | 6980 | 7000 | 7600 |
| 2 | 4.5 | 2750 | 5427 | 1550 | 7491 | 7500 | 8200 |



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