









| Bolt Head | Grade & Material | Nominal Size Range (in) | Mechanical Properties | | |
|---|---|-------------------------------------|-----------------------|--------------------|--------------------|
| | | | Proof Load | Min Yield Strength | Min Tensile |
|  | 307A Low Carbon Steel | 1/4" to 4" | N/A | N/A | 60,000 |
|  | Grade 2 Low/Medium Carbon Steel | 1/4" to 3/4" Over 3/4" to 1-1/2" | 55,000 33,000 | 57,000 36,000 | 74,000 60,000 |
|  | Grade 5 Medium Carbon Steel, quenched and tempered | 1/4" to 1" Over 1" to 1-1/2" | 85,000 74,000 | 92,000 81,000 | 120,000 105,000 |
|  | Grade 8 Medium Carbon alloy steel, quenched and tempered | 1/4" to 1-1/2" | 120,000 | 130,000 | 150,000 |
|  | 651 Silicon Bronze Alloy of copper, tin & silicon | 1/4" to 3/4" 7/8" to 1-1/2" | N/A N/A | 55,000 40,000 | 70,000 55,000 |
|  | Aluminum Aluminum alloy | All sizes | N/A | 36,000 | 55,000 |