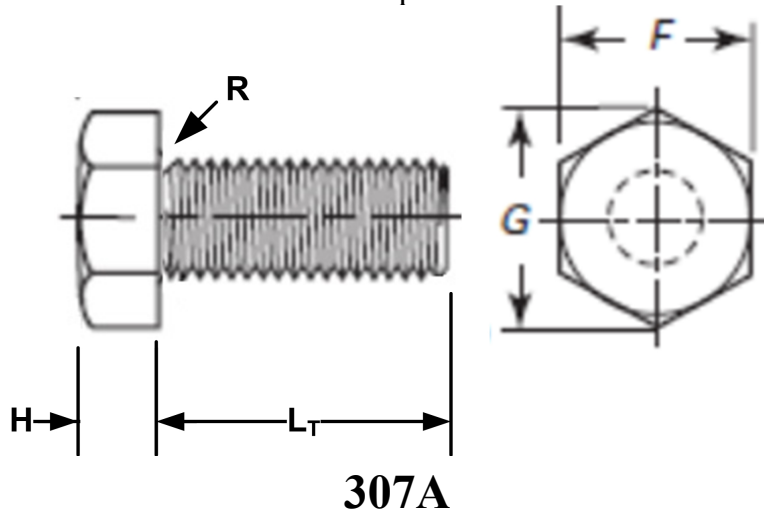


# Hex Tap Bolts



**307A**

GRADE MARK

| THREAD DATA   |   |  |
|---|---|--|
| Size: 1/2   | Threads per in.: 13                     | Series Designation: UNC                                |
| Thread Class or Type: 2A  | Major Diameter: 0.4985 - 0.4876         | Pitch and Functional Dia.: 0.4485 - 0.4435             |
| Tensile Stress Area: 0.1419                                     | Standard: ASME B1.1 - 2003 (R2008)      | Length: 3  |
| Length Tolerance: +0.06/-0.08                                   |   |  |
| DIMENSIONAL DATA  |   |  |
| Type: Hex Tap Bolts   | Standard: IFI - 199                     | Nominal Diameter: 0.5                                  |
| F - Width Across Flats: 0.750 - 0.725                           | G - Width Across Corners: 0.866 - 0.826 | R - Fillet Radius: 0.030 - 0.010                       |
| H - Head Height: 0.364 - 0.302                                  | Point Type: Non-pointed                 |  |
| PHYSICAL REQUIREMENTS   |   |  |
| Nominal: 0.5  | Standard: ASTM A307A-2014               | Typical Materials: low carbon steel, 1006 through 1022 |
| Hardness: HRB 69 - 100  | Tensile Load, Min. (lbf): 8,514         | Yield PSI, 2% Offset, Machined Specimen: 36,000        |
| Elongation, min. %, Machined Specimen: 18                       | Tensile Strength, Min. (psi): 60,000    | Calculated Shear Load-BODY (ref.)(lbf): 5,108          |
| Calculated Shear Load-THREADS (ref.)(lbf): 4,257                | Straightness Factor: 0.018              | Calculated Pretension <sup>2</sup> (lbf) : 3,831       |
| Tightening Torque <sup>1</sup> : 35 ft.lbf, 421 in.lbf, 47.6 Nm |   |  |
| FINISH DATA   |   |  |
| Finish: Zinc & Clear, non-hexavalent/Cr(VI) free - .0001"/ 3µm  | K factor (ref. DIN 946): 0.22           | Standard: ASTM F1941/F1941M-2016, Fe/Zn 3AN            |

<sup>1</sup> These torque values are based on K factors determined using DIN 946, tightening tension of 75% of the yield strength, and the calculation formula T=KDP. These values are advisory only. The torque for assembling critical joints should be determined and/or verified through actual experimentation by the user. The IFI is not responsible for any losses or claims resulting from the use of these values. <sup>2</sup> Calculated Pretension is equal to 75% of the bolt's yield strength achieved when using the indicated Tightening Torque.

