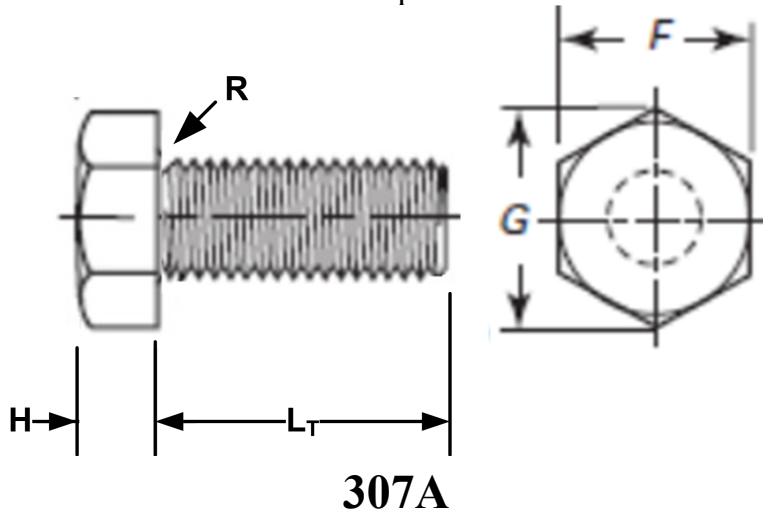


Hex Tap Bolts



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: 5-1/2
Length Tolerance: +0.08/-0.10		
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: 0.033	Calculated Pretension ² (lbf) : 3,831
Tightening Torque ¹ : 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

¹ 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. ² Calculated Pretension is equal to 75% of the bolt's yield strength achieved when using the indicated Tightening Torque.

