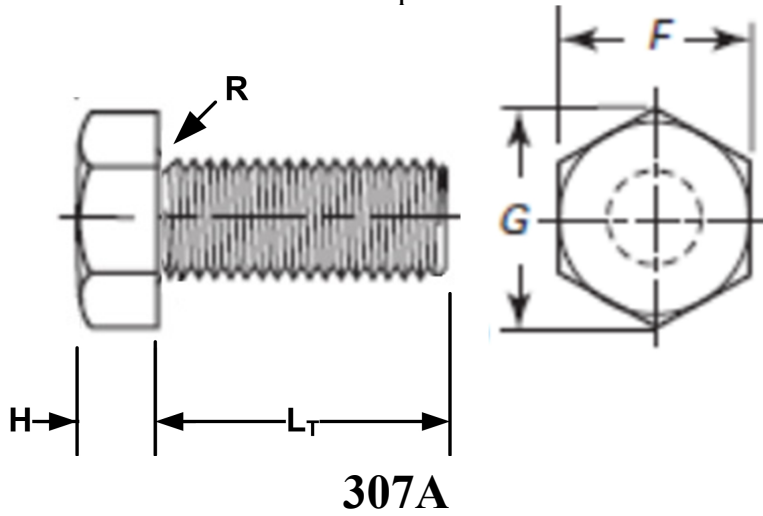


# Hex Tap Bolts



**307A**

GRADE MARK

THREAD DATA		
Size: 1/4	Threads per in.: 20	Series Designation: UNC
Thread Class or Type: 2A	Major Diameter: 0.2489 - 0.2408	Pitch and Functional Dia.: 0.2164 - 0.2127
Tensile Stress Area: 0.0318	Standard: ASME B1.1 - 2003 (R2008)	Length: 4-1/2
Length Tolerance: +0.06/-0.10		
DIMENSIONAL DATA		
Type: Hex Tap Bolts	Standard: IFI - 199	Nominal Diameter: 0.25
F - Width Across Flats: 0.438 - 0.425	G - Width Across Corners: 0.505 - 0.484	R - Fillet Radius: 0.030 - 0.010
H - Head Height: 0.188 - 0.150	Point Type: Non-pointed	
PHYSICAL REQUIREMENTS		
Nominal: 0.25	Standard: ASTM A307A-2014	Typical Materials: low carbon steel, 1006 through 1022
Hardness: HRB 69 - 100	Tensile Load, Min. (lbf): 1,908	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): 1,145
Calculated Shear Load-THREADS (ref.)(lbf): 954	Straightness Factor: 0.027	Calculated Pretension <sup>2</sup> (lbf) : 859
Tightening Torque <sup>1</sup> : 4 ft.lbf, 47 in.lbf, 5.3 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.

