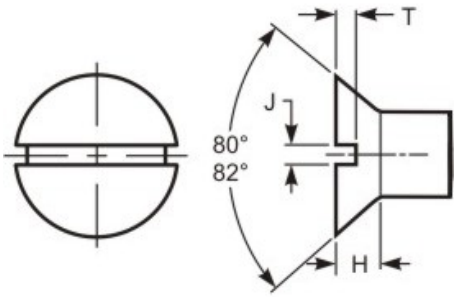
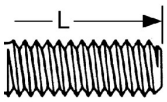
80º/82º - Flat Head - Sltd





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:** 3
Length Tolerance: -0.09		
DIMENSIONAL DATA		
Type: 80º/82º - Flat Head - Sltd	**Standard:** ASME B18.6.3 - 2013	**Nominal Diameter:** 0.25
A - Head Diameter: 0.477 - 0.442	**H - Head Height:** 0.153 ref	**J - Slot Width:** 0.075 - 0.064
T - Slot Depth: 0.070 - 0.046	**F - Protrusion Height:** 0.050 - 0.029	**G - Gage Diameter:** 0.424
PHYSICAL REQUIREMENTS		
Nominal: 0.25	**Standard:** ASME B18.6.3-2013, Machine Screw (carbon steel)	**Typical Materials:** low carbon steel, 1010 through 1022
Hardness: HRB 100 - 70	**Tensile Load, Min. (lbf):** 1,908	**Yield PSI, 2% Offset, Machined Specimen:** 36,000
Tensile Strength, Min. (psi): 60,000	**Calculated Shear Load-BODY (ref.)(lbf):** 1,145	**Calculated Shear Load-THREADS (ref.)(lbf):** 954
Straightness Factor: 0.018	**Calculated Pretension[2] (lbf) :** 859	**Tightening Torque [1]:** 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

[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.

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