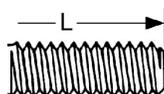


80°/82° - Flat Head - Type III-Type I Combo (Square-Phillips Combo)



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) | |
| DIMENSIONAL DATA | | |
| Type: 80°/82° - Flat Head - Type III-Type I Combo (Square-Phillips Combo) | Standard: ASME B18.6.3 - 2013 (reference) | Nominal Diameter: 0.25 |
| A - Head Diameter: 0.477 - 0.442 | H - Head Height: 0.153 ref | Driver Size: 3R |
| Penetration Depth: Sq: 0.095 - 0.080 (Ph: 0131 ref.) | Wobble: Sq: 3° max. | F - Protrusion Height: 0.050 - 0.029 |
| G - Gage Diameter: 0.424 | M - Ref. Recess Dim.: 0.276 | L - Length: 3/4 |
| Length Tolerance: -0.03 | | |
| 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: N/A | Calculated Pretension² (lbf) : 859 | Tightening Torque¹ : 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.