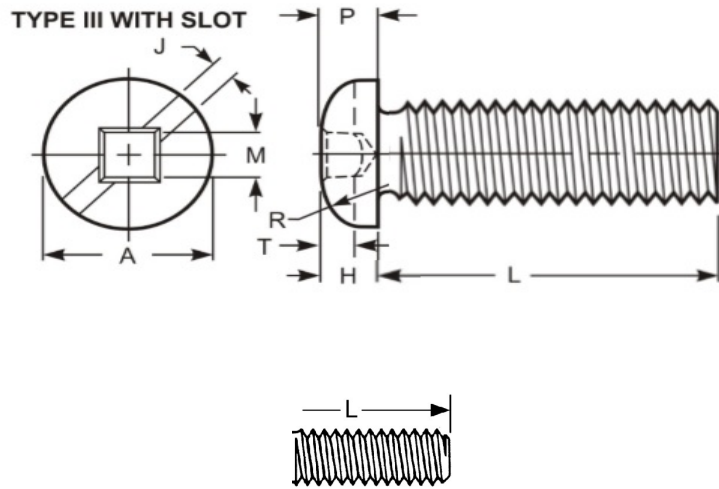


## Round Head- Type III/Sltd Combo (square socket/slot combo)



### GRADE MARK

| THREAD DATA   |  |  |
|---|--|--|
| <b>Size:</b> 1/4  | <b>Threads per in.:</b> 20                                       | <b>Series Designation:</b> UNC                                     |
| <b>Thread Class or Type:</b> 2A   | <b>Major Diameter:</b> 0.2489 - 0.2408                           | <b>Pitch and Functional Dia.:</b> 0.2164 - 0.2127                  |
| <b>Tensile Stress Area:</b> 0.0318                                      | <b>Standard:</b> ASME B1.1 - 2003 (R2008)                        |  |
| DIMENSIONAL DATA  |  |  |
| <b>Type:</b> Round Head- Type III/Sltd Combo (square socket/slot combo) | <b>Standard:</b> ASME B18.6.3 - 2013                             | <b>Nominal Diameter:</b> 0.25                                      |
| <b>A - Head Diameter:</b> 0.472 - 0.443                                 | <b>H - Head Height:</b> 0.175 - 0.160                            | <b>J - Slot Width:</b> 0.075 - 0.064                               |
| <b>T - Slot Depth:</b> 0.109 - 0.082                                    | <b>Driver Size:</b> 3R   | <b>Penetration Depth:</b> 0.095 - 0.080                            |
| <b>M - Ref. Recess Dim.:</b> 0.133                                      | <b>L - Length:</b> 2   | <b>Length Tolerance:</b> -0.06                                     |
| PHYSICAL REQUIREMENTS   |  |  |
| <b>Nominal:</b> 0.25  | <b>Standard:</b> ASME B18.6.3-2013, Machine Screw (carbon steel) | <b>Typical Materials:</b> low carbon steel, 1010 through 1022      |
| <b>Hardness:</b> HRB 100 - 70   | <b>Tensile Load, Min. (lbf):</b> 1,908                           | <b>Yield PSI, 2% Offset, Machined Specimen:</b> 36,000             |
| <b>Tensile Strength, Min. (psi):</b> 60,000                             | <b>Calculated Shear Load-BODY (ref.)(lbf):</b> 1,145             | <b>Calculated Shear Load-THREADS (ref.)(lbf):</b> 954              |
| <b>Straightness Factor:</b> 0.012                                       | <b>Calculated Pretension<sup>2</sup> (lbf) :</b> 859             | <b>Tightening Torque<sup>1</sup> :</b> 4 ft.lbf, 47 in.lbf, 5.3 Nm |
| FINISH DATA   |  |  |
| <b>Finish:</b> Zinc & Clear, non-hexavalent/Cr(VI) free - .0001"/ 3µm   | <b>K factor (ref. DIN 946):</b> 0.22                             | <b>Standard:</b> 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.

