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

GRADE MARK

THREAD DATA		
Size: #8	**Threads per in.:** 32	**Series Designation:** UNC
Thread Class or Type: 2A	**Major Diameter:** 0.1631 - 0.1571	**Pitch and Functional Dia.:** 0.1428 - 0.1399
Tensile Stress Area: 0.0140	**Standard:** ASME B1.1 - 2003 (R2008)	

DIMENSIONAL DATA		
Type: 80º/82º - Flat Head - Type III-Type I Combo (Square-Phillips Combo)	**Standard:** ASME B18.6.3 - 2013 (reference)	**Nominal Diameter:** 0.164
A - Head Diameter: 0.312 - 0.285	**H - Head Height:** 0.100 ref	**Driver Size:** 2S
Penetration Depth: Sq: 0.063 - 0.048 (Ph: 0.087 ref.)	**Wobble:** Sq: 3º max.	**F - Protrusion Height:** 0.039 - 0.023
G - Gage Diameter: 0.267	**M – Ref. Recess Dim.:** 0.182	**L - Length:** 1
Length Tolerance: -0.03		

PHYSICAL REQUIREMENTS		
Nominal: 0.164	**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):** 840	**Yield PSI, 2% Offset, Machined Specimen:** 36,000
Tensile Strength, Min. (psi): 60,000	**Calculated Shear Load-BODY (ref.)(lbf):** 504	**Calculated Shear Load-THREADS (ref.)(lbf):** 420
Straightness Factor: N/A	**Calculated Pretension[2] (lbf) :** 378	**Tightening Torque [1]:** 1 ft.lbf, 14 in.lbf, 1.5 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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