

Taig Lathe T-Slot

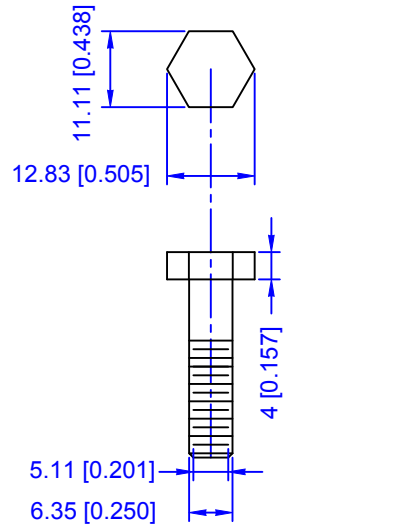
The standard bolts used on Taig Lathes are #10-32 Hex Socket Head Cap Screws. DIY T-Bolts can be made from larger fasteners by grinding or milling the head area to fit into the T-Slot. Fine or coarse thread fasteners can be used but be sure to use at least Grade 5 or better yet grade 8. Stainless Steel (A2, Type 304 or 18/8) versions will be approximately equal to grade 5 in strength.

The Dome of a 1/4 carriage bolt can be as much as 0.145 inches in height. They also generally have a rounded or flat edge. I am showing the worst case scenario.

The 30° angle and 3mm radius are approximate. The important bit is to have a smooth transition.

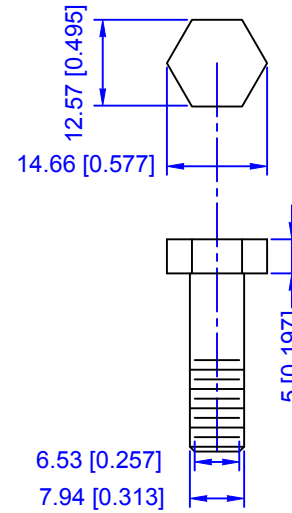
Note:

The minor diameters shown are actually the tap bore diameter for UNC fasteners of the designated size.



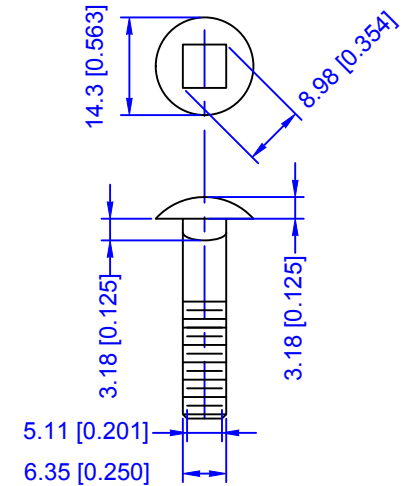
1/4 Inch Hex Head Cap Screw

Shank X-Section 31 sq mm



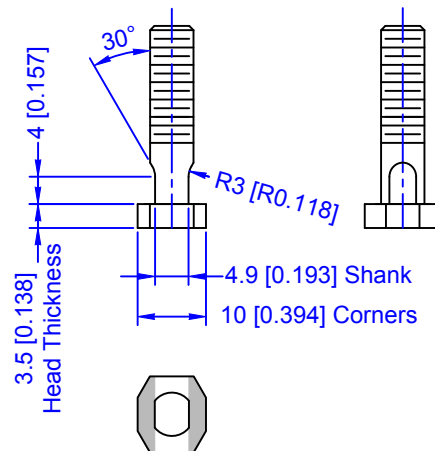
5/16 Inch Hex Head Cap Screw

Shank X-Section 49 sq mm



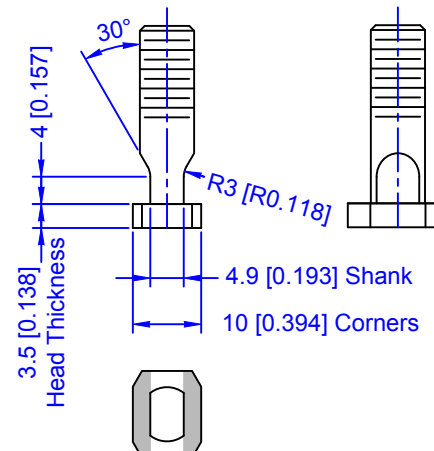
1/4 Inch Carriage Bolt

Shank X-Section 31 sq mm



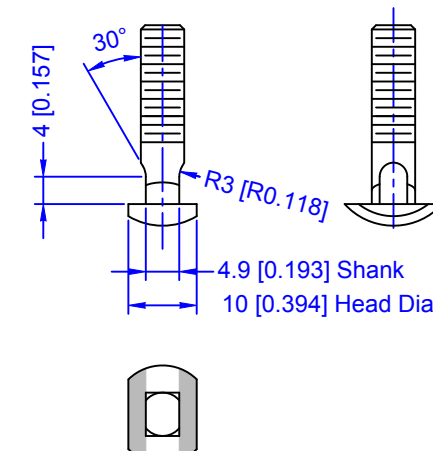
T-Bolt made from 1/4 Inch Hex Head Cap Screw

Bearing Area 44 sq mm
Shank X-Section 28 sq mm



T-Bolt made from 5/16 Inch Hex Head Cap Screw

Bearing Area 58 sq mm
Shank X-Section 36 sq mm



T-Bolt made from 1/4 Inch Carriage Bolt

Bearing Area 60 sq mm
Shank X-Section 28 sq mm

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Lewis Balentine, Houston, Texas, 9 February 2020

Unless otherwise noted all dimensions are in millimeters [inches]