



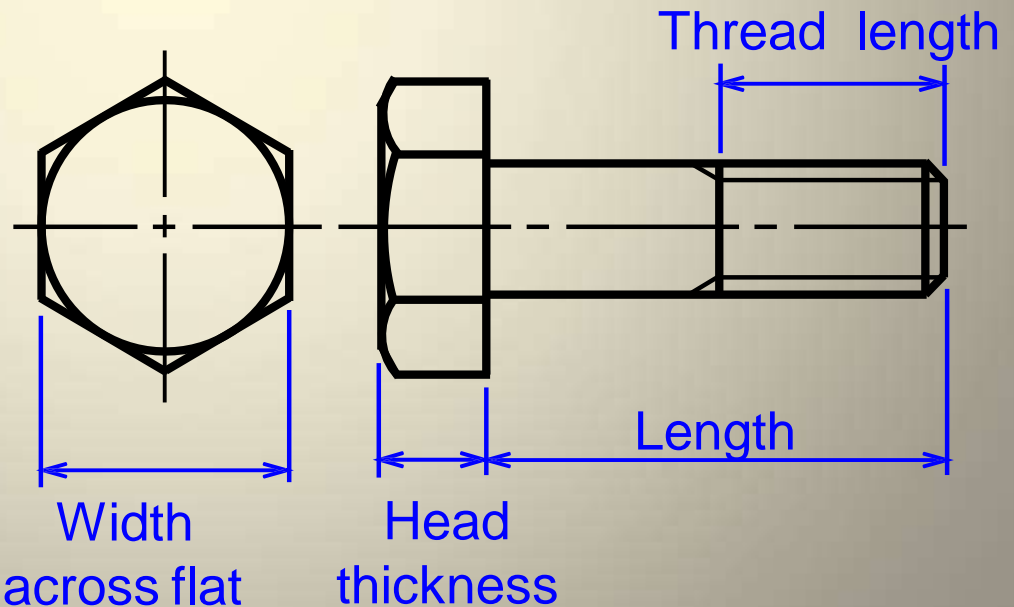
BOLT TERMINOLOGY

Drawing of bolt and nut

Bolt is a threaded cylinder with a head.

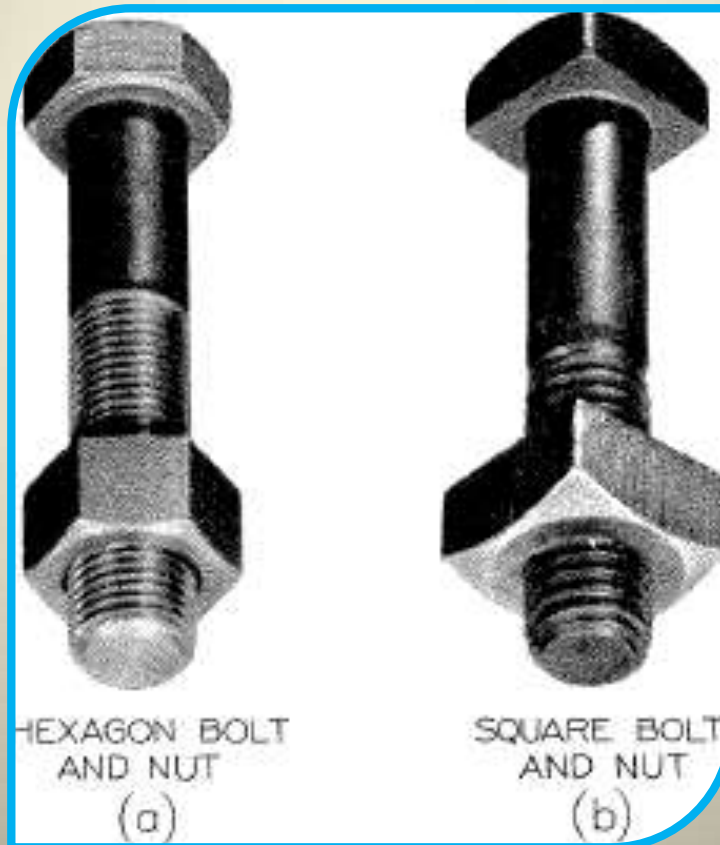


Hexagonal head
bolt and nut





Types of Bolts





The standard proportions for nuts and bolt heads may be obtained from the standard tables published by B.I.S.

Approximate standard dimensions

D= the nominal diameter of the bolt

Height or thickness of the nut: $T=D$

Width across flats, $W=1.5D + 3 \text{ mm}$

Angle of chamfer= 30°

Radius of the chamfer, $R= 1.4D$

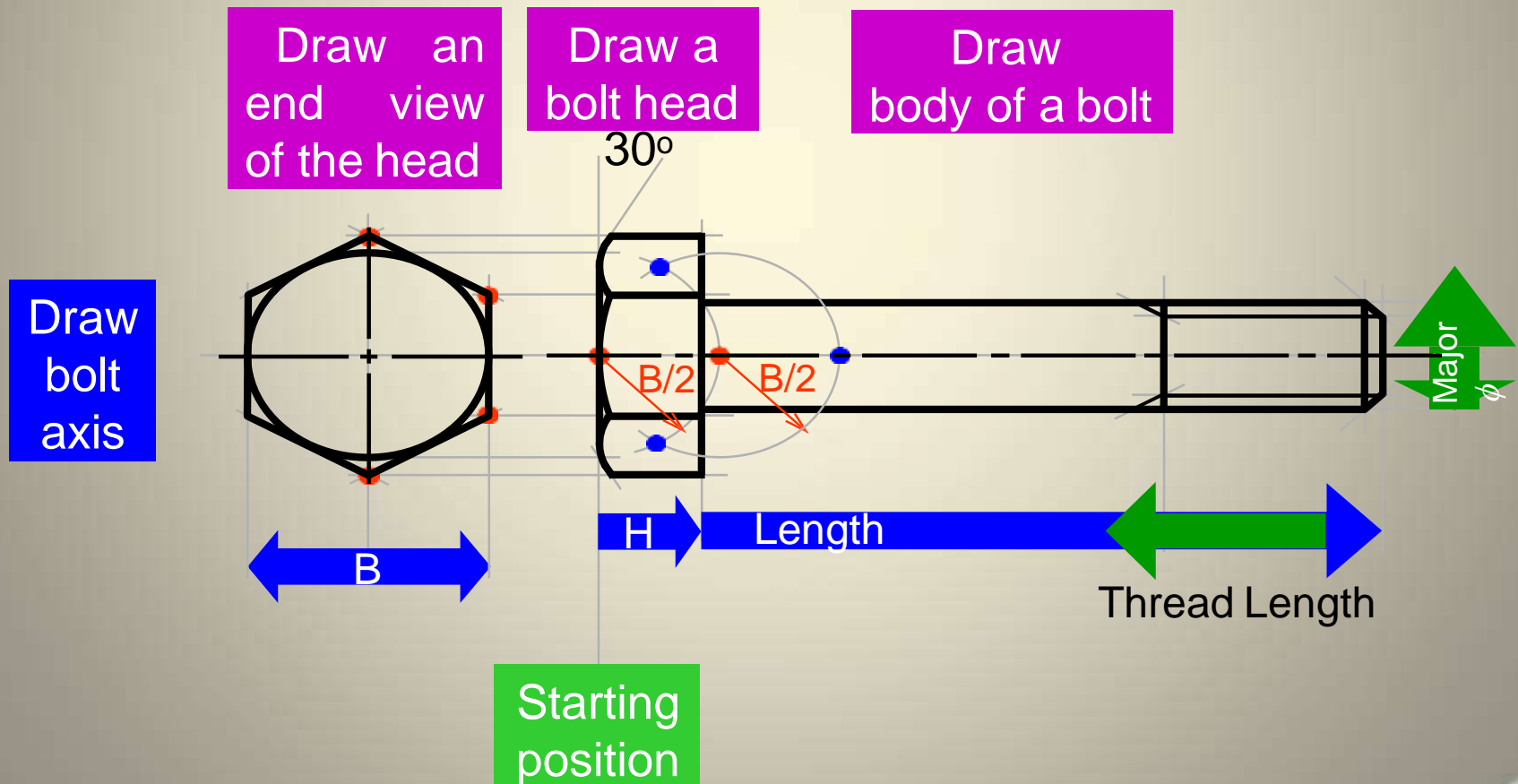


Approximate dimensions of a washer

1. Diameter of washer = $2D + 3 \text{ mm}$
2. Thickness = $0.12 D$
3. Angle of chamfer = 30°



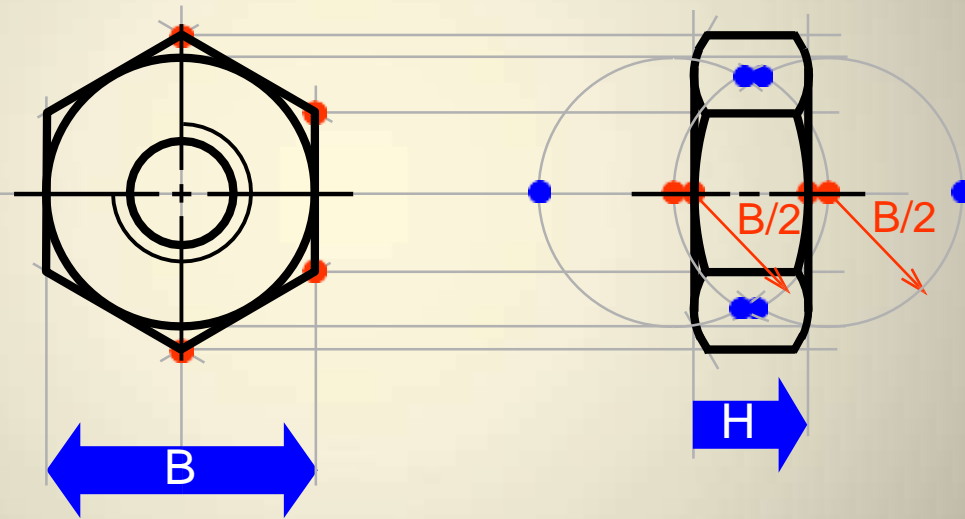
BOLT : Drawing steps





NUT : Drawing steps

Draw an end view
of the nut

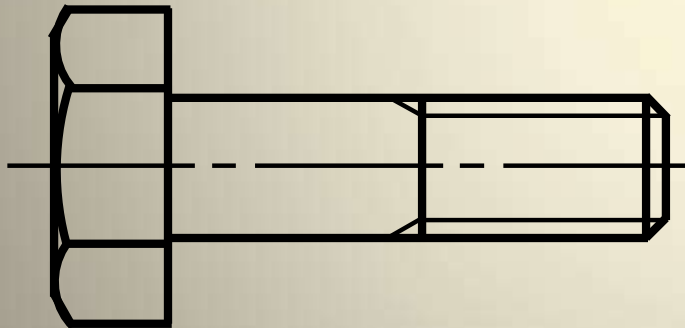


Dash lines represent
a threaded hole are
omitted for clarity.

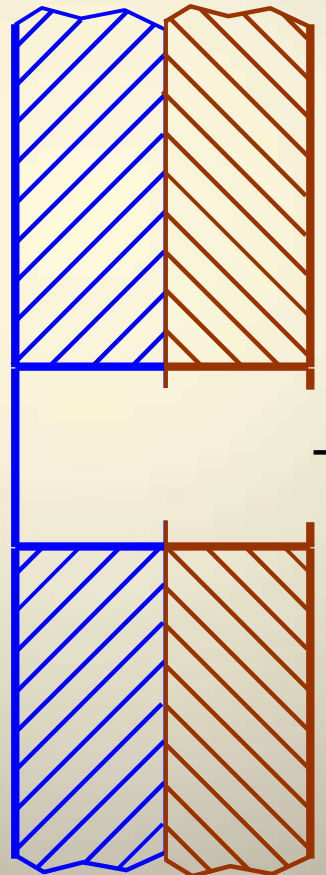


BOLT

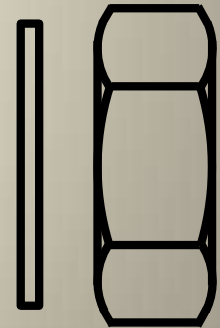
Application



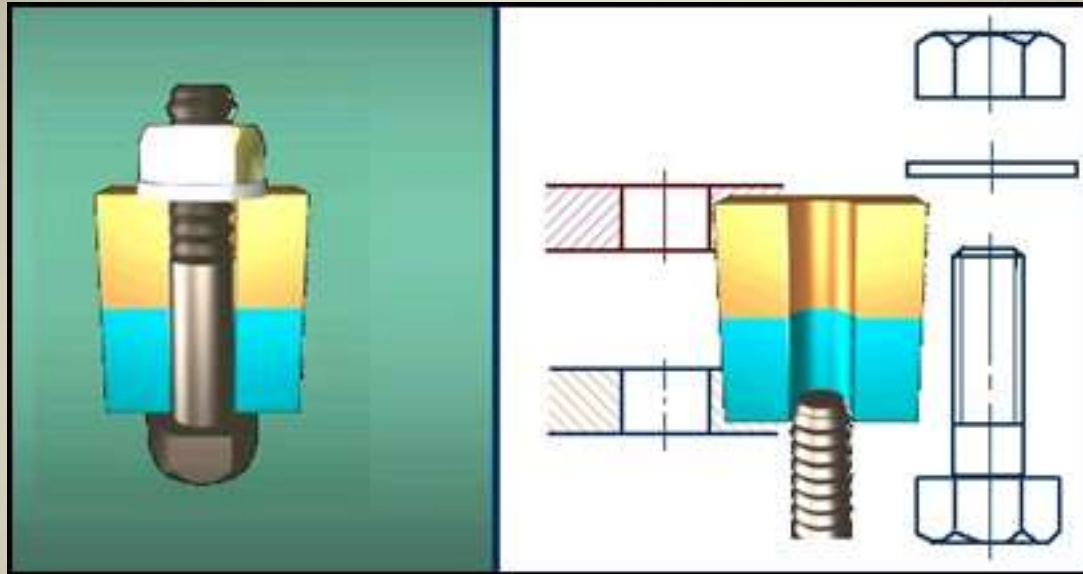
1. Insert a bolt into
a **clearance hole**



2. Insert a **washer**.



3. Screw a **nut**.



Bolts are used to connect two pieces that are not too thick.

Two clearance holes are drilled on both pieces in order to pass through the bolt, then a nut and a washer are used with it to connect the two pieces together.



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The End

Thanks