



C172 Project Screw Standards

Imperial vs Metric

Metric must always be used whenever possible, the imperial system is kinda garbage. What the heck does a #5 hole look like? What's a 9/32" by 52 TPI screw even look like? Why is a #10 countersink different than a #10 twist bit? Why do some align with AWG but some do not? Why is 10 smaller than 9? Why can't I just drill a .200" hole!?!

Screw Sizes:

TOFIX: Make a "Size joke" that wouldn't get me canceled.

Size	Diameter for heat inserts	Diameter for self-tap	Use/Notes	Common Lengths
<u>All Hail Mectravia! [ISO/Metric]</u>				
M2	2.81	1.8	Smallest diameter standard screw	8, 12, 16 20
M3	3.04	2.8	Standard Small Instrument Screw	6, 10, 14, 20
M4	3.74	3.8	Need a little more strength, usually used in motor mounting	10, 20, 30
<u>Imperial Scum [SAE]</u>				
#6-32 (3.505 2 mm)			Only standard imperial screws in the project because they are the size panel mounting screws in the actual Cessna 172 Alternative: M4 screw, oversize holes.	

Do Not Use

M2.5 Use only if you have to - we prefer M2 because M2.5 is a less common size

What are you Counter Sinking about?

Screws by default should be **countersunk**.

Countersinks can easily be added in 3D Printing and allow the screw to be flush (ie for putting a decal over)



Countersunk screws can be used as pan-head screws in a pinch, but pan-head screws cannot be used as countersunk screws.

Screw Head

Screw Head should be a **Phillips or hex head**. We use Philips as you can get away with using fewer tools, and therefore fewer tool changes.