

MMAN1130 – Design and Manufacture

Engineering Drawings Tips and Tricks

Keep the following in mind when creating your engineering drawings and you will be on the way to professional, high quality drawings in no time!

Redundant views

Any view in addition to the minimum 2 views (in some cases you might only need 1 view) which doesn't give any additional information is considered a redundant view. This also encompasses cross-sectional views. Cross sections are used when the part is very complex and using standard views and hidden lines does not provide enough information to accurately reproduce the part. The exception to this is when the clarity of a drawing is at risk by reducing down the number of views. ALWAYS PRIORITY CLARITY.

Redundant dimensions

Remember, engineering is all about precision. You only need the minimum number of dimensions to completely reproduce your part. Be careful when using centerlines and symmetry... you may end up repeating one dimension at several views.

Centerlines

Can be used to reduce the total amount of information (dimensions, callouts, etc) required to describe a part. For example, we can use centerlines to show that our part is symmetric and use symbols such as 2 x M8 to show that there are two M8 threads (mirrored across a centerline). This prevents having duplicated dimensions. Don't forget to put centermarks on all holes.

Hole positioning

If you have multiple holes that are positioned symmetrically, and you want to duplicate the dimensions, you HAVE to use specific centerlines (circular or rectangular). Find more information in the 'Positioning Holes' section on page 27 of Engineering Drawing by AW Boundy.

Threads

If you have a thread DO NOT show the real thread. You just need to show the symbol. Find more information in the 'Dimensioning Metric Threads in Holes' section on page 34 of Engineering Drawing by AW Boundy.

Hidden Lines

You should not show hidden lines or tangent lines on an isometric view. You MUST show hidden lines on all other views.