Drawing Guidelines

Basically we can use drawings of any kind, from sketches on the back of a napkin to fully nested CAD files. However, the better the drawings or information we receive the less it will cost to cut. If the customer can provide CAD file ready to cut, there is very little setup time needed before cutting reducing cutting costs significantly. We do offer full CAD drafting and reverse engineering service, to take any design from sketches or hard copy drawings and or original parts to cutting. Listed below is a guide on available cutting area and materials we commonly cut:

- **Cutting Area –** 2550mm long (100 Inches) X 1525mm wide (60 Inches) X 100mm high (4 Inches). However, longer items can be cut using a multi-stage process, if required.
- **Materials –** We can cut most alloys, plastics, ACM sheets, timbers, plywoods, composite materials, foams, gasket materials and cardboards.

For customers with CAD capabilities, looking to maximize reductions in cutting cost and lead times, some basic CAD guidelines have been layout below:

1. **File Formats** - .dxf is best, however .dwg and vectored .pdf files can be used. Any other file formats will require either conversion or redrawing. If you are unsure, please call to discuss.
2. **Drawing Units** - Ensure your drawing units are set to the correct format. We can work with either Imperial or Metric units, however all Imperial units must be in Inches and all Metric units must be in Millimetres. Please state the which units are used in when forwarding files.
3. **Size Reference** - Please provide a size reference for at least one part per drawing to enable us to carry out a quick sanity check to ensure the drawing is at the correct scale. Sometimes when sharing between different CAD programs, units and scale information may not translate correctly.
4. **Layers –** For jobs that require cutting at different depths, it is recommended that each depth should be drawn on its own layer. Through cuts can be drawn on Layer 0 and will be cut approx. 0.5mm (0.020 Inches) deeper than the material thickness. Please name all other layers according to their depth of cut from the top surface of the material. Please apply a separate layer appropriately named for any engraving. It is also recommended to colour each layer differently for clarity. The colours use does not matter.
5. **Line Style –** All lines need to be continuous, drawing line weight does not affect CNC Routing.
6. **Part Nesting –** This is a service that Hunter CNC Routing provides, however the customer can reduce cost by nesting their parts themselves. If the customer chooses to do their own part nesting, consideration needs to be made in regard to part spacing, grain direction and maximum material utilization.
7. **Part Spacing –** To ensure enough material is left between each part to provide adequate part holding during cutting, at least 4 times the material thickness is recommended between parts. It is also recommended to leave at least 4 times the material thickness between parts and the outer edges of the material boundaries. Special circumstances may not allow this to be possible, if this is the case we recommend discussing this with us prior to nesting.
8. **Part Fits –** CNC Routing is very accurate so parts made size for size generally will not slot into each other without considerable force. Wooden parts requiring a snug fit, need a clearance of 0.1mm. Other materials and different fits may require some level of testing prior to cutting the actual parts. If certain fits are necessary, it is recommended to discuss your requirements with us before finalising drawings to ensure correct fits are reached.
9. **Double Check** - Please go over and double check everything prior to forwarding files, any mistakes in the drawing files can add significant unwanted cost and delays to your cutting project.