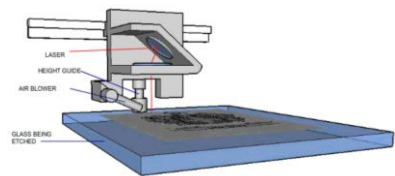


The work/material being engraved or cut by the laser is held firmly in position on a vacuum bed. The work/material is normally positioned in the top left corner as shown in the diagram below. The machine operates with three axis, X, Y and Z. The top left corner is regarded as coordinates (0,0,0), this is sometimes called zero point or the start point.

The diagram below shows a coat of arms being etched on a sheet of transparent glass. The lens unit focuses the laser in exactly the right position as it cuts / etches.



The laser is deflected from its source within the machine through a series of precision lenses/mirrors and focused accurately on the area to be cut/etched. The laser removes small dots of material, up to 1200 dots per inch. This means that it is able to cut extremely accurate shapes and produce astonishingly detailed etchings. The laser cutter is similar to an ink jet printer. The printer sprays ink onto the paper in a series of dots that make up a picture or text. The laser cutter removes material in a series of dots producing pictures / etchings and shapes cut away from the surface of the material.

Finishing techniques:

Rasp: The first hand tool to be used when finishing wood. Has rough metal teeth.

File: The second hand tool to be used when finishing wood. Has finer teeth.

Sandpaper: Final stage of the finishing process.

Belt sander: Machine used to finish wood, give a very smooth finish.



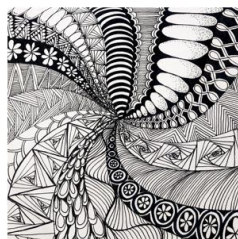
Design styles:

Scandi: designs which often use natural forms as a starting point, simplified into simple geometric forms. Colours are bright with a background of white. Originates from the area of Scandinavia

Pattern; A pattern is made when a shape is repeated many times



Zentangles



A zentangle is basically a very detailed black and white pattern drawn within a shape.