

DESIGN;- TECHNICAL DRAWING

Technical drawing is a process of drawing precise, accurate drawings of your design ideas, that show all the key details to be able to clearly communicate the design to another person. It is used by designers in many different disciplines from engineering and architects to product designers, and of course, jewellers too.

Technical drawings are drawn to scale and usually from several viewpoints to make sure every detail of the design is shown and it is accurate down to the smallest detail. It is easiest to do your technical drawings on graph paper, as it makes the measuring / scale easier. If you then need to transfer them to create presentation images, you can use tracing paper, or scan them and use photo editing software.

There are several types of technical drawing, some are done as a single drawing with perspective, you can also do cut away drawings which are particularly useful if you have a hollow form; but the most useful for jewellery design (in most cases) is an orthogonal projection, which shows different views of the same piece, to ensure that all the details are described, and you can communicate your entire design as fully as possible.

WHY DO TECHNICAL DRAWING

A technical drawing is used to fully describe your design. This is useful in some cases for yourself, to help you plan out exactly what goes where, the thickness or size of profile of different sections, and other details - by drawing it out, you are forced to think through and decide on each detail. It can also be done as a record of your design, or to help plan out the materials needed for a piece.

Technical drawings can be used when presenting ideas to a potential customer, so that they can fully understand the design that you are proposing, they are also useful to have to work from, so that when it comes to making your designs in real life, they will fit and look just how you envisioned. This is particularly important if you are outsourcing some or all of the production of your pieces. The manufacturer needs to be able to understand exactly what you are looking for, the sizes, thicknesses, pattern details and everything that you are expecting them to do.

SUPPLIES

- Graph paper - I like the 2mm square ruled pages - this has squares that are 2mm x 2mm marked out, and then it has bolder lines that mark out 10mm (1cm) and 20mm (2cm) squares.
- Tracing paper (useful to transfer your drawing)
- Sharp HB or 2H pencil (or a technical drawing / mechanical pencil with a fine lead)
- Ruler
- Compass
- Useful, but not essential to have; - circle stencils, and/or stencils for any other shapes you may regularly use.

SCALE

The scale of a drawing, is how the size of the drawing compares to real life. For example an architect will not draw a house out life size - it needs to fit on the paper, so it will be

scaled down (reduced in size). You need to know the scale used to create the drawing, so that you can convert it back to a real object. Jewellery drawings are most often done at a 2-1 scale - this means that every 2mm on your drawing represents 1mm in real life - drawing pieces twice their real life size. Especially for very small, detailed designs, drawing them larger makes them easier to draw, and to get the details just right. You can however, of course, choose to draw at any scale you prefer - you could draw life size at 1-1 scale, or go up even bigger at something like 4-1.

Drawing at 2-1 on the 2mm squared graph paper means that each 2mm square on the paper actually represents just 1mm in your drawing, and the bolder lines at 10mm intervals, represent 5mm in your drawing.

DIFFERENT VIEWS

A typical orthogonal projection technical drawing / diagram is drawn / shown from 3 (sometimes up to 6) different angles, to make sure that every detail needed to be able to fabricate the piece is shown.

The standard views are a front view, side view and a top view. These are all shown together on one page, aligned with each other. By arranging them in this way - it is a little like the sides of a box opened up and flattened out onto the page - it makes it easier to draw as you can follow the measurements from the front view upwards, to the top view and across to the side to create the side view. It is almost always easiest to start from the front view (the bottom left in the image below).

A compass (or circle stencil) is needed if you work with designing rings, and/or including round beads or gemstones. A ruler and a sharp pencil are also very useful - if your pencil is too soft or blunt, you won't achieve the precision you need.

If your drawing doesn't end up particularly neat, you can trace it onto a fresh sheet of paper to give a cleaner drawing for presentation to a customer etc.

This clean traced image can also be used to paint or colour to give a realistic, rendered presentation drawing, which is great either for your own records, or to present to clients.

ANNOTATE

Make sure to mark your drawing with your name, date, the scale and any other key details.

You can note the metal and the gemstones to be used, and related specifics.

Although you should be able to take measurements directly from a scale drawing, you can also mark on key measurements such as ring and stone diameter for clarity.

