Irvine Royal Academy—Technical Department S1/S2 Design & Manufacture Theory Notes Sanding machines



Belt sander

Commonly the largest and most frequently used sander, the belt sander has a long straight abrasive surface which can be mounted vertically, horizontally or have the option of both. The work is supported by a table, generally sitting at 90 degrees to the abrasive surface, but a feature which can also be adjusted on some machines. The belt sander is ideal for levelling pieces of timber and shaping rounded corners.

Disc sander

Made of a circular abrasive paper, mounted on a circular plate, the disc sander is ideal for working on the end grain, shaping round corners and removing material quickly. The work is supported by a flat table - like the belt sander - which sits in front of the abrasive disk.





Bobbin sander

The bobbin sander is ideal if you are looking to sand curves or straighten edges and can reach parts of the wood which both the belt and disc sander cannot. Also known as a spindle sander, the bobbin sander consists of a table-top with an abrasive sanding drum protruding through a hole. When in use, the drum both rotates and oscillates, giving a consistent sand along the length of the work-piece whilst also protecting the lifespan of the sleeve.

Palm sander

Palm sanders are compact tools which can be used one-handed and is lightweight, allowing easy handling. The abrasive used is self-adhesive, allowing for switching of abrasives and simple attachment to the base of the sander. The palm sander is ideal for sanding large flat surfaces as well as rounding sharp edges and fitting into corners and tight spaces.





Safety rules

All sanders should be used with care and safety in mind and only for sanding and shaping small amounts of wood so not to burn the abrasive. The following safety rules should be adhered to at all times when using sanders:

- Suitable eye protection worn
- Keep work-piece flat on the table
- Fingers and other body parts kept away from abrasive
- Loose clothing and hair tucked in
- Extraction hose is attached and on (bobbin & palm)