

Sanding

How to make use of the sanders in the woodwork machine room.

- [How do the sanders work?](#)
- [How do I use the sanders?](#)
- [What materials can I use with the sanders?](#)
- [How do I book the sanders?](#)
- [What sanding machines do we have in the workshop?](#)
- [What Personal Protective Equipment \(PPE\) do I need to use the sanders?](#)

How do the sanders work?

The belt sander consists of an electric motor that turns a pair of drums. A continuous loop of sandpaper is mounted between these drums. The motor of the belt sander is enclosed for safety. The sandpaper however is exposed during use. You must take care must not to touch the sanding surface while the machine is running.

The bobbin sander is a rotating cylindrical drum covered with gritty sandpaper. The same motor that powers the belt runs the bobbin sander. This means that it is spinning whenever the machine is on. For safety the bobbin is always covered by the removable guard when not in use. We add an additional plate at the bottom of the drum when in use. This stops the material you are sanding from slipping under the drum.

The disc sander is consists of a circular piece of sandpaper attached to a wheel. An electric motor spins this wheel. The majority of the disc sander is enclosed for safety. The disc spins counter clockwise. The right side of the disc is guarded to prevent material pulling out of your hand by the rotation. The left side of the disc is covered by an adjustable guard. This should sit as close to the material as possible when machining.

[Next Page: How do I use the sanders?](#)

[Return to: Sanding menu](#)

How do I use the sanders?

- Ensure you are wearing correct [PPE](#).
- Ensure the extraction hood is open.
- Place your material on the table of the sander but not touching the sanding surface.
- Hold the material flat against the table. A jig may be required for irregular shaped objects.
- Check any adjustable guards are covering any of the sanding surface not being used.
- It is good practice to check the emergency stop before use.
- Start the machine and allow to reach full speed.
- Gently press the edge of your object against the sanding surface. If you are using the fence or angle guide it is important to hold the material firmly against it. This will stop the material being pulled from your hand. Never blow the dust away from your piece. This will cause settled dust to move into the air, making it more likely to be inhaled.
- When finished stop the machine and allow the bit to come to a full stop. Ensure you leave the machine clean and tidy. There is a Hoover available to clean.

[**Next Page: What materials can I use with the sanders?**](#)

[**Return to: Sanding menu**](#)

What materials can I use with the sanders?

The sanders are primarily used to sand wood. It is ideal for sanding [plywood](#) and both hardwood and softwood timber. Never machine MDF (Medium Density Fibreboard) on the sanders. It creates fine dust which can cause damage to lungs.

The sander can also be used to machine plastics such as [acrylic](#) and polycarbonate. Plastic is prone to heating up during sanding. Plastics should be sanded slowly to avoid hot chips coming off and landing on your skin.

Sheet material is ideal for the sanders. Care must be taken when sanding round and irregular shaped material, such as tree branches. It might be necessary to make a jig to hold the object. This will stop the object being pulled out of your hand or your hand into being pulled into the sanding surface.

[Next Page: How do I book the sanders?](#)

[Return to: Sanding menu](#)

How do I book the sanders?

All students must book a workbench to be in 3D workshop. Booking a workbench for a 3 hour slot gives you a space to work and access to all necessary tools, sundries and equipment with technical supervision and guidance.

We will only be accepting booked appointments to comply with social distancing guidelines. No walk ins will be accepted.

You can book a workbench via the [Online Resource Booking \(ORB\)](#).

You must complete an online Health and Safety induction before booking a workbench.



The sanders are yellow machines. This means students can use the equipment but must get staff approval before each use. A member of staff will also supervise.

[Next Page: What sanding machines do we have in the workshop?](#)

[Return to: Sanding menu](#)

What sanding machines do we have in the workshop?

The sanders are used to remove a small amount of material from the edges of pieces. The sanders are useful for smoothing rough edges or removing a few millimetres.

There are 2 type of sanders in the machine room of the 3D workshop:



Belt Sander

Belt sanders are normally used for the beginning of the sanding process, or to rapidly remove material.

The belt sander also has a bobbin sander attachment. The bobbin sander is designed to help you achieve a smooth finish on curved edges and internal holes.

Disc Sander

The other machine is a disc sander. The disc sander is slower than the belt sander. It is usually used for fine sanding or small pieces.

The angle of the sanding surface of both machines can be adjusted. This allows for sanding of any angle between 0 and 90 degrees. A fence and an angle guide are also available on both machines. These help you guide the material flat against the sanding surface. Push sticks and push blocks are always available. These help keep your fingers away from the surface when sanding smaller objects.

[Next Page: What Personal Protective Equipment do I need to use the sanders?](#)

[Return to: Sanding menu](#)

What Personal Protective Equipment (PPE) do I need to use the sanders?



You must wear safety glasses, ear defenders and a dust mask when using this machine. Tie back any long hair and tuck in loose clothing.

[**Return to: Sanding menu**](#)

[**Return to: Woodwork machinery**](#)