

Edge sander

Background

The edge sander is used to sand the edges of engineered wood and solid timber, and for general sanding of small workpieces. You can sand straight and level, with different angles and curved shapes, and you can sand down to a specified depth. With an attachment you can sand inside a small or closed shape such as a hole. The workpieces are fed past the sanding belt by hand. To sand a large number of parts, you can fit a power feed to the machine.

Stop and think!

The edge sander must not be used to sand ferrous metals as this can cause sparks, fire and dust explosion.

Machine structure

The edge sander consists of a frame, an adjustable horizontal table and a sanding belt running between two vertical rubber-coated rollers. One of the rollers – usually the bigger of the two – drives the belt using a strong electric motor. Between the rollers there is a platen behind the sanding belt, providing a level surface to press against.

Extractor

Sanding generates a lot of dust so there is an extractor next to each roller. The extractor covers can be removed to sand curved edges directly against a roller.

Oscillating rollers and sanding belt

To prevent scratches on the workpiece, the rollers and the sanding belt oscillate, in other words they move up and down a few centimetres several times a second. This also spreads the wear on the belt over a larger surface area. You can raise and lower the sanding belt and the rollers to make use of the full belt width, even if you are only sanding a thin edge.

Table

The table can be tilted and you can usually attach an angle fence to sand the ends of a workpiece to any angle.

Infeed and outfeed fences

Some machines have an adjustable infeed fence and outfeed fence. Between the fences and behind the sanding belt there is a sanding pad. You can sand down to a certain depth by changing the position of the infeed fence. Here, the machine does more or less the same job as a jointer.

Operation

From the edge sander control panel you can control

- on/off
- belt speed
- oscillation
- belt tension.

The tool

In an edge sander, the material is removed by a belt of strong paper or fabric coated in a layer of abrasive particles glued onto the surface. The abrasive particles consist of a hard mineral with sharp edges such as aluminium oxide. The spaces between the abrasive particles are important as they allow the removed dust to be carried away. If the spaces are clogged with dust, the belt can no longer work properly.

The ability of the sandpaper to remove material depends on the grit size. The sandpaper is graded according to the grit size – 60 grade is coarse and 150 grade is fine. Grit sizes of between 40 and 800 are available.

The sanding belt has a join which must be protected, so to avoid damaging it, the belt must be installed with the correct direction of rotation. The belt usually has arrows printed on the inside to indicate the direction of rotation.

Stop and think!

The sanding belt must be handled with care to avoid tears at the edges, which may cause the belt to break.

Sanding belts are best stored hanging up, at normal humidity and room temperature. The abrasive particles lose their sharp edges after a period of use, creating a less attractive finish on the workpiece, increasing power consumption and generating excess heat. The dust from sanding often sticks to the belt surface, leaving marks in the sanded surface. In the worst case, the belt can break and damage the machine and the workpiece.