

Bandsaw

Background

The bandsaw is one of the oldest woodworking machines and is found in most joineries and furniture workshops. It is used for rip cutting with an adjustable fence or for contour sawing. You can also cut the workpiece at any angle using an adjustable crosscut fence. The bandsaw is great for sawing small workpieces that other types of saw cannot handle so well.

Machine structure

The machine consists of the following parts.

Table and frame

The table on a CE-marked bandsaw can be tilted up to 20 degrees for sawing. The tilt may be different on older machines. The bandsaw has a solid frame with two bandsaw wheels, the lower of which is the drive wheel.

Wheels

Bandsaw wheels are usually coated in rubber, but cork is sometimes used. The entire width of the bandsaw must rest on the wheels. The wheel diameter for bandsaws is usually between 600 and 900 mm. Both wheels must be fully enclosed with covers.

Bandsaw blade and blade guide

The blade guide controls the bandsaw blade. The back and side of the blade are supported above and below the table. The lower blade guide under the table is fixed and the upper blade guide is height adjustable. The blade guides have an important function in bandsaws because they determine the quality and accuracy of the cut. Maintenance and careful adjustment are therefore important, and the guides must be fitted correctly. Blade guides can save on stock and bandsaw blades if they are correctly adjusted. For additional control of the blade and the stock during sawing, a wooden table insert is used.

Rip fence

The rip fence can be adjusted laterally so you can set the required rip width.

Low fence

You can use a low fence if the distance between the blade and the fence is so small that the upper blade guide hits the rip fence when you lower it to the stock being sawn. The low fence is attached to the rip fence. It can be moved backwards and forwards in different positions. The low fence must not normally extend further than the saw blade.

Working with the machine

When you work with the machine, you may need to tilt the table. You also need to select the right tool depending on what you are planning to cut.

Select the tool

For contour sawing you should use a narrow blade (6-10 mm). The blade width depends on the sharpness of the curves. If you are cutting in a straight line, use a wide blade (over 20 mm).

Set the blade tension

The blade tension should not be too high. Modern bandsaws have a chart with a gauge indicating the blade tension. See the instructions for your particular machine. The narrower the blade, the lower the blade tension. When you have finished work and stopped the machine, you should loosen the blade tension to avoid indentations on the wheels which potentially cause the machine to go out of balance and vibrate.

There are several reasons why a bandsaw blade comes off the wheels, including:

- the blade thickness is not correct for the wheel diameter
- you have handled the machine incorrectly
- the wheels are out of line
- the blade was badly welded.

Use a power feed

You must use a power feed for rip cutting. Power feeds feed the stock more evenly and reduce the risk of accidents because your hands are kept away from the saw blade.

Tilt the table

The table can be tilted up to 20° in a CE-marked bandsaw. The tilt may be different on older machines. Note that the table insert must be changed if the table is tilted.

Stop and think!

Remember to lock the table securely after tilting it.

Use stands

You should use stands when cutting long workpieces. Stands can be placed on the infeed and outfeed side to prevent the workpiece falling.