

Thickness planer

Background

The thickness planer is among the most widely used machines in woodworking. It cuts workpieces to accurate dimensions. It is used to plane solid timber, usually after it has been flattened with a jointer.

Stop and think!

The dimensions may not be so accurate and the workpiece may be warped unless it is first flattened with a jointer.

Machine structure

The thickness planer has a rotating cutter head with two or four knives made of HSS or hard metal. There is a height adjustable table which determines the thickness of the planed stock. There are a frame and covers over the cutter head and other moving parts to stop you accessing them during operation.

Anti-kickback fingers

The anti-kickback fingers prevents the workpiece being kicked back towards the operator. The fingers are in sections so they can adjust to the stock if it varies in width.

Infeed roller

The infeed roller introduces the workpiece into the machine. It has a textured surface for a better grip on the stock to move it forward. It is in sections so it can adjust to the stock if it varies in width. Rubber-coated infeed rollers are also available.

Pressure bar and chipbreaker

A pressure bar holds down the workpiece before it reaches the cutter head. A chipbreaker holds down the workpiece after passing the cutter head.

Outfeed roller

The outfeed roller moves the stock out of the machine. The roller is often rubber coated.

Table rollers

The workpiece rolls on table rollers rather than sliding along the table. The rollers can be raised or lowered depending on the stock.

Working with the thickness planer

The power feed moves the stock to be planed towards the cutter head, which is above the table. The thickness planer cuts the workpiece down to a specified thickness, leaving a smooth surface. Modern thickness planers have a power feed that varies the feed rate depending on the timber and the required quality. Generally speaking, the higher the speed the worse the surface finish.

Most thickness planers these days have a working width of between 400 and 800 mm. Larger machines do exist, but they are specialist equipment.

The cutter head has two or four knives made of HSS or hard metal. The quality of the finished surface indicates when it is time to replace or sharpen the knives. The machine makes less noise if the knives are sharp. Hard metal knives are more expensive but stay sharper for much longer than HSS knives.