

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



Tenon Saw

A tenon saw is used for cutting small pieces of wood with some accuracy. It is designed for cutting joints, such as tenons, which is where it gets its name from. They can only cut straight lines. The saw is made up of three main parts—the **handle**, **blade** and **back**. The back of the saw is there to keep the thin blade rigid, stopping it from bending. The saw has small teeth. When used, the wood is usually held in a **sawing board**.

Coping Saw

A coping saw is used for cutting small pieces of wood into a curved shape. It can also be used for cutting thing plastic. The saw is made up of three main parts—the **handle**, **blade** and **frame**. The frame of the saw is tensioned to keep the thin blade rigid, stopping it from bending. The handle loosens to allow the blade to be removed or replaced. The blade has small teeth. It is important that the blade is not twisted as this will cause it to jam in the wood. Only one hand is used when using the saw. When used, the wood is usually held in a **vice**.





Hack Saw

A hack saw is used for cutting metals, such as steel, aluminium or copper. It can also be used to cut plastic. The saw is made up of three main parts—the **handle**, **blade** and **frame**. The frame of the saw is there to keep the blade tight. A thumbscrew is used to tension the blade. The blade has small teeth. When used, the metal is usually held in an **engineer's vice**.

Junior Hack Saw

A junior hack saw saw is used for cutting small pieces of metal or plastic. The saw is made up of two parts—the **blade** and **frame**. The frame of the saw is there to keep the thin blade rigid, and often also incorporates a handle. In some versions the hand can be a separate part. The blade has small teeth, but it can only cut in straight lines. When used, the material is usually held in a **vice**.





Cross-cut Saw

A cross cut saw is used for cutting larger pieces of wood. The saw is made up of two main parts—the **handle** and **blade**. The saw doesn't have a back, like a **tenon saw**, to allow it to saw right through wide sheets of timber, such as **plywood**. There are different types of saws which are similar to the cross-cut saw—the **rip saw** and the **panel saw**. The main difference between the three is the size of teeth on the blade—a cross-cut saw has smaller teeth, a rip saw has large teeth. The panel saw is a 'half-way' version, often used for cutting man-made boards.