

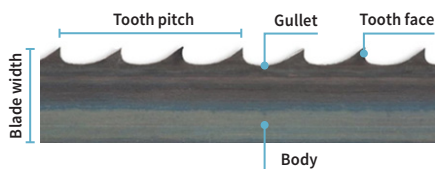
Bandsaw blade selection

Bandsaws are versatile machines, that are commonplace in school workshops as they allow for precision cutting of wood and various wood-based materials. However, the effectiveness of a bandsaw greatly depends on the quality, condition and type of blade used.

Choosing the right bandsaw blade is crucial for achieving clean cuts, maximising efficiency, and prolonging the life of the machine. In this short guide, we'll explore the key factors to consider when selecting the correct bandsaw blades to purchase for certain applications.

Blade anatomy

Before delving into blade selection, it's essential to understand the anatomy of a bandsaw blade. Blades consist of teeth, gullets, and a blade body. The teeth do the cutting, the gullets provide space for chip removal, and the blade body provides support and stability.



Blade width and thickness

Blade width and thickness impact the type of cuts you can make. Wider blades are suitable for straight cuts and resawing, while narrower blades excel at intricate curves and detail work. Thicker blades offer greater stability and are ideal for heavy-duty cutting, while thinner blades provide tighter curves and finer cuts.

Tooth pitch

The tooth pitch of a blade is determined by the type and thickness of the material being cut. For woods and plastics, a minimum of three teeth should be in the cut - e.g. for 12 mm thick wood use 6 teeth per 25 mm. For metals, between 4 and 20 teeth should be in contact.

Tooth form

There are various tooth form configurations, including hook, skip, and regular (also known as raker).

A hook tooth configuration is best suited for making fast, long cuts in thicker softwoods. As they cut quickly, they produce a noticeably rough finish.

A skip tooth is suitable for softer materials and general-purpose cutting. This is provided on coarse tooth blades and commonly supplied as 3, 4 and 6 teeth per 25 mm. They feature a wide shallow gullet to facilitate the efficient removal of waste.

The regular tooth configuration comprises of a repetitive pattern where one tooth is set to the right, the next to the left, and the third, known as the raker tooth, without any set. This arrangement is most effective when cutting materials of consistent thickness. It is particularly suited for contour sawing applications, where intricate curves or shapes are being cut into the material. Regular tooth blades, with a triangular tooth form, are preferred for finer cuts with 10 or more teeth per 25 mm, where waste storage is less of a concern.

3 tpi - skip form

Primarily used for cutting deep rip cuts, leaving a rough sawn finish.



4 tpi - skip form

Effective for cutting across and with the grain, this blade can achieve a reasonable finish.



6 tpi - skip form

An excellent all-around blade suitable for crosscutting up to approximately 150 mm and ripping sections up to 50 mm thick. It provides a good clean finish.



10 tpi - regular

Ideal for cutting plywood, MDF, non-ferrous metals, and plastics.



14 tpi - regular

Very fine toothed blade ideal for cutting thin plywood, plastics, laminates and MDF. It is not suitable for cutting thicker natural timbers as the teeth will clog with saw dust. This type of blade should be used on slow speeds and slow feed rates.



Blade tension

Proper blade tension is critical for achieving accurate cuts and prolonging blade life. Insufficient tension can cause blade drift and premature wear, while excessive tension can lead to blade breakage. Follow the manufacturer's guidelines for tensioning the blade, and regularly check and adjust tension as needed. <<