

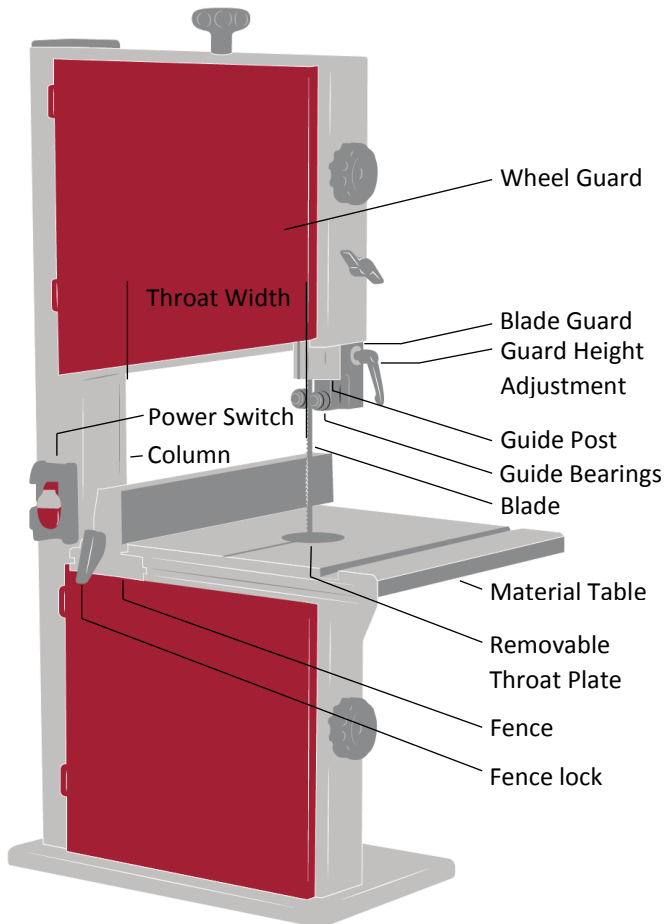
Refresher Guide: Band Saw

Use: Drill holes in wood, plastic, and metal.

SAFETY GUIDELINES FOR OPERATING A BAND SAW:

- Wear safety goggles
- Always check that the blade is sharp and undamaged
- Never wear gloves near active blade
- Wear a mask when operating for long periods of time or working with harmful material

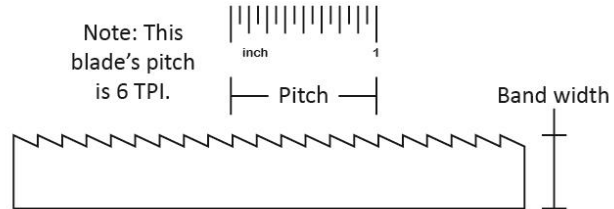
HOW TO USE:



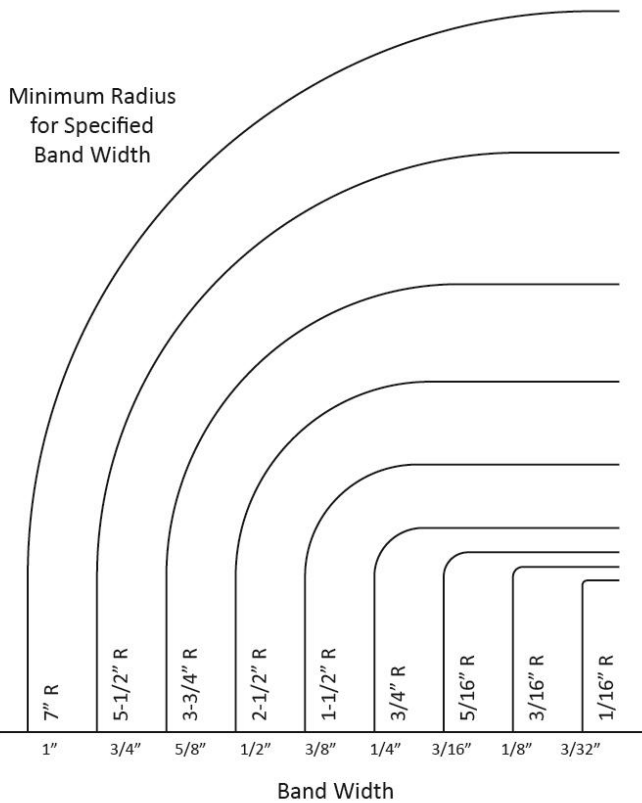
1. Mark intended cut on material.
2. Check that material will fit in the machine and that size of blade tooth is appropriate for material.
3. Adjust height of blade guide to $\frac{1}{4}$ " above stock. Adjust fence if necessary.
4. Turn on machine.
5. Hold part firmly against the table and gently feed material through the blade letting the machine do the cutting. Use scrap wood to push stock near the end. See that material will be supported after cut.
6. Turn off machine and wait for blade to stop completely before moving parts.
7. Clean your workspace including any dust and scraps.

Band Saw Blade Guide

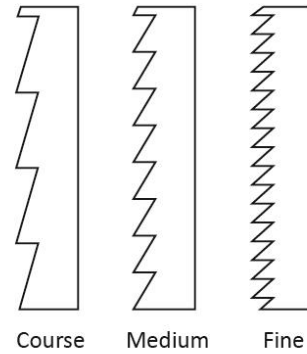
There are many factors to consider when choosing a band saw blade, but the most important are the **pitch** (number of teeth per inch, indicated as TPI) and the **band width**. The **tooth shape** is somewhat important as well.



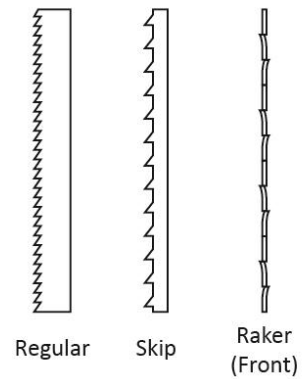
Radius Guide



Blade Types



Tooth Shapes



Tips for Choosing the Proper Blade

Band Width

- Wide bands can be used for straight cuts, while curves require a thinner band (see Radius Guide)

Pitch

- Typically, thinner materials call for a higher pitch, and thicker materials call for lower
- A higher pitch is used for a slower, finer cut; lower pitch produces a quicker, rougher cut
- During operation there should be at least 3 teeth in the workpiece at any given time, and no more than 24; 6-12 is ideal

Tooth Shape

- Raker pattern blades (with teeth that bend to either side) are used for cutting metal

Other Tips

- When a very fine finish is desired, a cutting fluid can be added during operation
- Pushing materials through the blade too quickly or using too fine a blade will dull the blade more quickly than proper use
- How to tell when a blade is dull:
It's difficult to follow a straight cut line
The blade cuts slowly or not at all
The edges do not feel sharp in off position

Material	Pitch (Teeth Per Inch)	Blade Type
Low Density: Wood, Lightweight Plastics, Foam, etc.	Coarser Pitch 6-14 TPI	Regular Tooth Skip Tooth
Medium Density: Heavier Plastics, Lightweight Metals (aluminum, brass), etc.	Medium Pitch 12-22 TPI	Regular Tooth Skip Tooth
High Density: Workable Metals (steel) *Not Brittle Metals (like stainless steel)*	Finer Pitch 20-32 TPI	Regular Tooth Raker Pattern