

Band Saw



Photo by John Dennett

A Bandsaw in the Laboratory

[Labeled Photograph](#)

[Description](#)

[Selecting and Installing a Blade](#)

[Operating a Band Saw](#)

[Lubricating the Blade](#)

[Cutting Round Stock](#)

Description

The bandsaw is useful for cutting stock to size and roughing out shapes. It contains a serrated blade that forms one continuous loop. The blade is stretched over two pulleys, the upper one idle, the lower one driven by a variable speed electric motor.

Selecting and Installing a Blade

There are many different types of blades that can be installed in a band saw. They vary in tooth size, tooth shape, blade material, etc. If you're unsure of what type of blade to use for a particular task, the job selector dial may provide guidance, or refer to a handbook or manufacturer's documentation. The material to be cut should be at least three tooth widths in thickness. Therefore, it is often best to cut thin sheets with a shear rather than with a bandsaw (see **Working with Sheet Metal**). When the proper blade is found, it can be cut to length and welded into a continuous band using an electrical resistance welder built into the band saw. Upper and lower doors open to expose the pulleys. A tensioner allows the upper pulley to be raised and lowered. Lowering the upper pulley makes it easier to install a new blade. The blade must lay properly in the upper and lower blade guides. Once the blade is in place, the tension should be set and locked.

Operating a Band Saw

Before starting the bandsaw, you should adjust the blade guide/guard to the appropriate height. The less blade that's exposed, the safer you will be. Always set the blade guide just high enough to clear the part you're cutting.

The appropriate cutting speed varies widely for different jobs. For instance, mild steel should be cut at much lower speeds than Aluminum alloys. The Job Selector Dial may help you choose the right motor speed for your task. To adjust the blade speed the motor must be on. Motor speed can be varied with the variable speed control while motor rpm is monitored on the speed indicator dial.

When cutting with a bandsaw, proper technique is important. Do not lean excessively into the work and keep your hands braced against the table.

One of the best features of the bandsaw is its ability to cut curved shapes. Watch for proper position of the hands in this clip.

Lubricating the Blade

If you're making a long or deep cut, lubricate the blade with stick wax. Just push the tube briefly into the running blade. Do not attempt to apply wax with your fingers.

Cutting Round Stock

The band saw has a tendency to spin round stock and the rough edges of the stock could cut your hands. To avoid this, secure the stock in a drill press vise before cutting.
