

SAW PIERCING

MATERIALS:

- Materials to cut – metals, wood, plastic, sheet, rod or wire

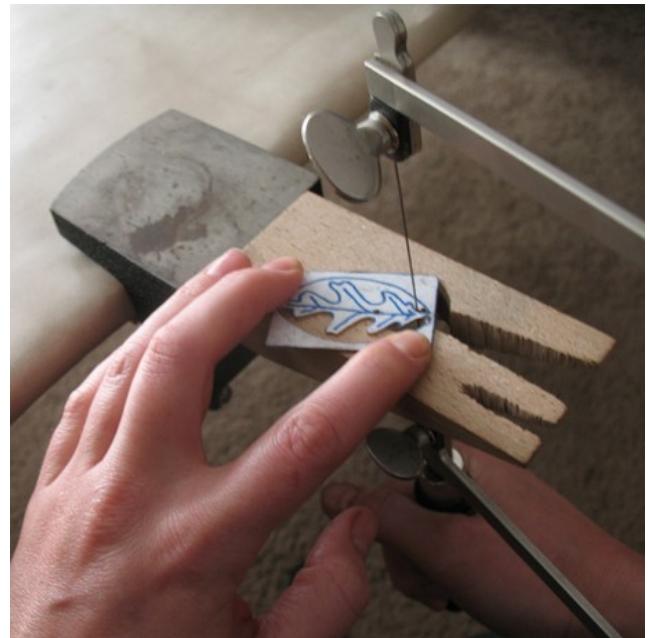
TOOLS

- Bench peg
- Piercing saw frame
- Piercing saw blade

Piercing is great for fine detail and complicated Shape. It leaves a fine edge which does not require much finishing. Piercing can be used to cut most metals and materials.

1. Fit the blade.

Piercing saws come as a frame – like a fretsaw or hack saw – with a replaceable blade. Blades are available in different sizes and are held in place with a clamp at either end. The blades used in the class are 2/0.



Hold the blade so that the teeth point down (like a Christmas tree) and face outwards from the frame and secure the bottom of the blade in the clamp. Standing up, push the top of the frame against the top of the workbench and rest the handle of the frame against your breastbone. Lean forward and compress the saw slightly as you fix the top of the blade into the top clamp. This creates tension in the blade which keeps it taut while you work. It should ping nicely if it is tight enough.

2. Mark out your design

Depending on how precise your design is there are many methods to mark your pattern onto the metal. You can use a marker pen to draw directly onto the metal though this can rub off as you handle it. You can scribe (scratch) the design directly into the metal. This is good for precision but if you make a mistake it can take a lot of work to sand it away. If the metal is covered in a protective plastic film you can draw directly on this. A reliable method I use is to draw or print my design onto sticky paper labels. Stick the label onto the metal and cut round. It can peel off and any residue can be scrubbed away afterwards.

3. Support your work.

Piercing saws are best used with a bench peg to support work. Place the work so the line to be cut is over the V shape gap in the peg, this supports the piece on both sides as you cut.

4. Cut

Hold the saw with the blade vertical and at a right angle to the work and saw up and down keeping the blade upright. Begin with an upward stroke to notch the metal, you could use a sharp edge file to make a notch. Keep the saw facing away from you and turn the metal as you work. Your holding hand controls the metal, your sawing hand just provides an up/down movement. Don't be tempted to press the blade forwards, it is the downward stroke which cuts the metal, pushing the blade forward stresses it and makes it likely to break.

5. To cut an interior shape.

First drill a pilot hole through the inner piece to be removed, secure the bottom of the blade and thread the top through the pilot hole. Secure the top of the blade as above.

Saw blades are designed to break when they become dull. You will break blades and it's fine. Dispose of the sharp ends and keep going.