

## using a **Hacksaw**

Learn the tips and techniques to get the best results.

▼ **A Better Bite.**  
Choose a quality blade with a tooth count appropriate for the material.



For me, using a hacksaw was an exercise in frustration. The blade would often jam in the cut, or break. And the resulting cut was usually rougher than I'd like.

But, as I found out, there are some tips and tricks you can use to get the results you want from your hacksaw. The key to success starts with the tools and accessories.

### FRAME AND BLADES

The first, and perhaps most important, thing to consider is your hacksaw frame. Upgrading to a high-tension frame, like the one you see in the main photo, makes all the difference. It's a little more expensive, but the improved results prove its worth.

**Blade Tension.** And the reason is simple. The high-tension frame is able to put considerably more force on the blade to keep it straight. It helps prevent the twisting and buckling that

can sometimes occur when using a less expensive frame.

**Blade Quality.** The other important thing I learned was to spend my money on good quality, high-speed steel blades. There are many to choose from, but I like blades made by *Starrett*, *Lenox*, or *Bahco* (formerly *Sandvik*). These blades are more expensive than generic "gray" blades, but they're still less than a couple of dollars.

**Blades with a Bite.** And when you're choosing a blade, the number of teeth per inch makes a difference. It pays to take the time to switch out the blade for one that's appropriate for the task. (You'll find some unique, specialty blades on the next page.)

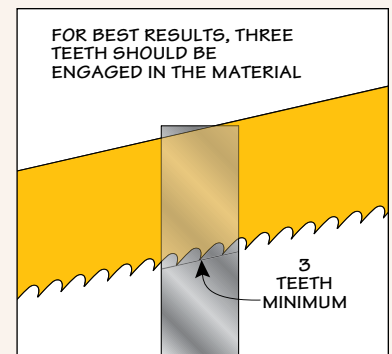
Standard metal-cutting blades are generally available with between 14 and 32 teeth per inch. For heavy-duty tasks like cutting a bolt to length, you can get by with a coarser, low tooth-count blade. But for thinner materials, you'll want to switch to a finer blade. The general rule of thumb for getting smooth cuts is that three teeth should be engaged in the material when possible (drawing at right).

**Stay Sharp.** Finally, I've learned it's important to throw the blade away as soon as you notice it's getting dull. There's no point in fighting with a dull blade when a replacement is so inexpensive.

### TECHNIQUES FOR SUCCESS

With the right equipment, you're on your way to better results. But there are some tips and techniques that will help as well.

**Clear Layout.** For clean, consistent cuts, go the extra step to mark clear layout lines. For metal, I sometimes use layout dye or a marker, then scribe the line with a sharp awl or metal scribe. This way, the layout line is easier to see against the dark background.





▲ **Simple Block.** A wood block nestled in angle iron helps guide the blade for a square cut.



▲ **Rabbeted Guide.** Clamp a hinge between rabbeted guide blocks for a smooth, straight cut.



▲ **Grooved Support.** A dado acts as a support and guide for cutting a section of T-track.

**Support.** But the most helpful thing you can do is fully support the workpiece. You can see in the photos on these two pages how I support a variety of workpieces. The key is to eliminate all vibration and movement as you push the saw into the cut.

**Blade Guides.** Like the rip fence on your table saw helps ensure a straight cut, a guide for your hacksaw can do the same. This can be as simple as a block of wood. Or two pieces of wood that “trap” the workpiece to prevent movement and guide the blade.

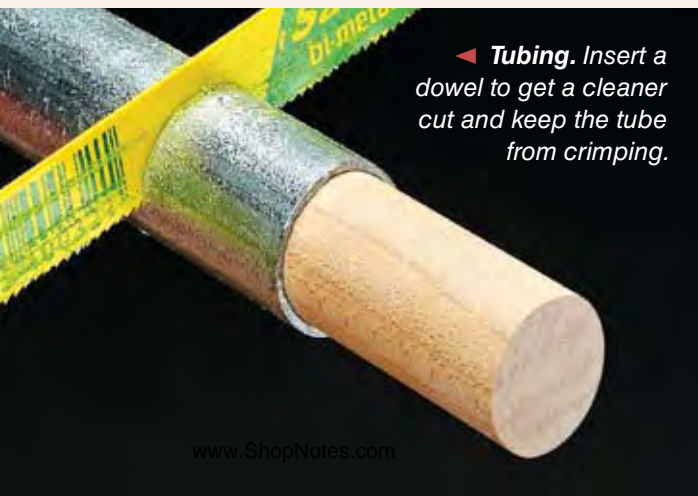
**Technique and Stance.** The final tip for straight cuts pertains to how you hold the saw during the stroke and how you position your body. Since I’m right-handed, my right hand is on the handle of the saw. My left hand is at the front of the saw to help apply slight downward pressure during the cut. The left foot is forward as I cut. To make the cut, it’s just a matter of pushing the saw into the material then releasing the

pressure on the return stroke. Once you get used to it, it feels natural.

**Cutting Loose.** While a hacksaw isn’t usually considered a precision tool, you can tame this rough-cutting saw with the right equipment and techniques. With a little practice, you’ll be getting professional results — without all of the frustration. 🛠️



◀ **Threads.** A couple of nuts and washers form a guide for cutting threaded rod and bolts to length.



◀ **Tube.** Insert a dowel to get a cleaner cut and keep the tube from crimping.

## specialty Blades

Standard hacksaw blades are great for everyday metal-cutting tasks in the shop. But if you need to cut curves or unique materials like fiberglass, hardened steel, or even glass, you’ll want to pick up a specialty blade.

Some blades have a carbide grit cutting edge to slice through tough materials (photo at right). While a spiral blade excels at cutting curves and openings in many types of material, including sheet metal (photo below).



▲ **Unique Blades.** Carbide grit (top two blades) and a spiral cutting edge (bottom blade) cut odd shapes and tough materials.



◀ **Odd Shapes.** A starter hole is all you need to cut an opening with a spiral blade.