7 must-have Files

These inexpensive tools make quick work of smoothing, shaping, and sharpening.

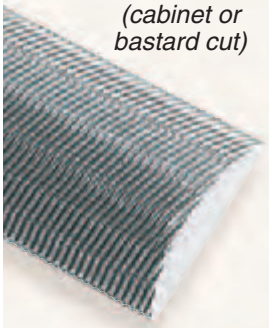
12" Half-Round. *It's like having two files in one. Use one side for smoothing curves and the other for flat areas.*

Woodworking

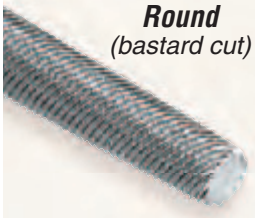
1 12" Half-Round. I think every shop would benefit from having all the files shown on these pages. But if I had to choose one, a half-round file would be at the top of the list (main photo). It's really two files in one. The flat side works the same as any flat file. While the round side takes care of any curves you're likely to encounter.

Shaping and smoothing can sometimes be tedious work. To do the job fast and accurately, I prefer long, coarse-cutting ("bastard" cut or "cabinet") files. These have larger teeth and are less likely to clog with wood shavings.

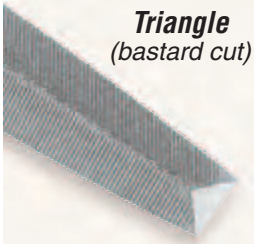
Half-Round
(cabinet or bastard cut)



Round
(bastard cut)



Triangle
(bastard cut)



2 10" Round. There are just two other woodworking files that I'd recommend for a good, essential set: a round or "rat tail" file and a triangle file. And if you think about it, these two are just extensions of the half-round file I talked about earlier.

Here's what I mean. The round file's tighter radius means I can get into and smooth out curves that a half-round file can't reach.

I also use a round file for increasing the size of holes and creating slots for screws or other hardware, as you can see in the left photo below. A 10"-long file gives me just the right balance of fast cutting and good control in tight spaces.

3 10" Triangle. Complementing the round file is the triangle file you see in the right photo below. The flat faces of the triangle file act like small flat files for getting into narrow spaces.

But I also like this file for its sharp edges. They allow me to create a clean, sharp corner. Often a bit of waste or saw mark is left in the corner and this file makes it easy to remove the blemish and leave a tight, crisp surface.

One final thing: I call these my "woodworking" files, but I use them for smoothing and shaping any non-metal material in my shop from plywood, to MDF, hardboard, and plastic laminate.

10" Rat Tail. *Use a round file to create slots or make holes larger. It also comes in handy for smoothing tight curves and scroll work.*

▲ ***10" Triangle.*** *The sharp angles of a triangle file let you clean up corners and other fine details. In a pinch, it acts like a small flat file as well.*

Metalworking

4 12" Flat. You might be tempted to just use your woodworking files for metalworking as well. But metal dulls files quicker. So to make my woodworking files last longer and cut smoothly, I have a separate metalworking set.

If you're like me, most of the metalworking you do is on flat surfaces. Then the first file on your list should be a long, flat file (first photo at right). The one I use is a bastard cut. The wide, flat faces can be used with long, sweeping strokes to quickly work down to your layout lines. Follow these with a draw file stroke to smooth edges that have been cut with a hack saw.

5 10" Square. The next file on the list is a thick, sturdy file with a square cross section. Like the triangle file for woodworking, this one tackles all the sharp details and corners. And since it's meant for detailed work in metal, I want a smoother finished surface. So a second cut is a good choice.

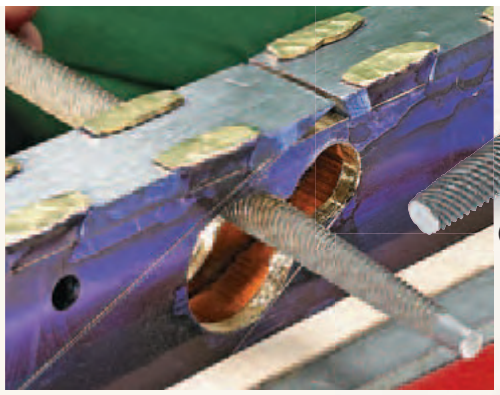
The reason I like a square file instead of the triangle is it's a natural for creating square corners, as in the first photo at right. To create a square slot, I start by drilling out most of the waste. Then I reach for the file and work up to the layout lines.

▲ ***12" Flat.*** *A big file lets you take long, even strokes to smooth out saw marks and square an edge.*

6 10" Round. Most of the curves you'll deal with in metal are either drilled holes or relatively small, tight curves. So I consider a round file a must for cutting and smoothing curves, as illustrated in the photo right above.

At risk of sounding like a broken record, a second cut version is a good balance between fast cutting and getting smooth surfaces.

Together the flat file, square file, and round file form the "Three Musketeers" of metalworking. They'll handle the lion's share of your metalworking needs.

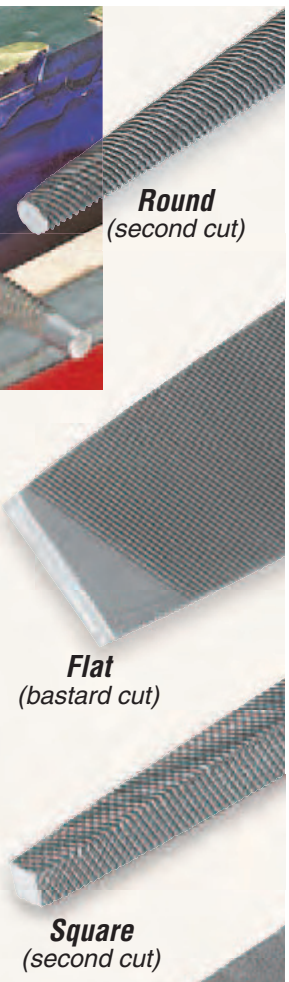


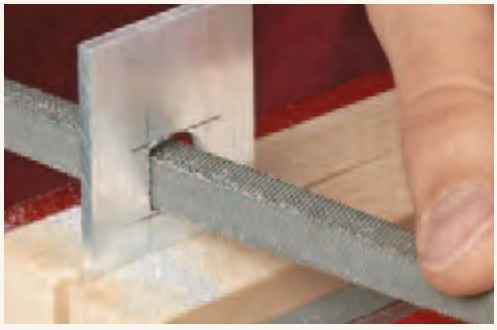
▲ ***10" Round.*** *A coarse-cutting round file makes quick work of shaping curves in most metals.*

7 12" Knife Edge. The seventh and last file on the "must-have" list is a smooth knife edge. At first glance, it doesn't look much different from a flat file. But it has a few important features.

The first is the thin, tapered profile. As you can see in the right photo below, this thin cutting edge can be used to shape fine lines and details in a workpiece.

Another thing to notice is the smooth flat spine of the file. This "safe" edge lets you work right into a corner without marring the adjacent surface.





▲ ***10" Square.*** *Turn a round hole square. In just a few strokes, you'll have nice, crisp corners and flat, smooth edges.*

▲ ***12" Knife Edge.*** *A narrow cutting edge is perfect for adding fine details to metal work. A "safe" edge protects adjacent surfaces.*

Make Them Last: Cleaning & Care

Files are tough, simple tools. But that doesn't mean you should store them in a coffee can. Keeping them cutting fast and sharp is easy.

Start by storing them so they can't bang around. The rack you see in the photo at right keeps each one separate and easy to grab. Next, a file card with nylon and metal bristles will help keep your files clean and free of buildup (wood shavings attract moisture and lead to rust). For metal working files, I go an extra step and rub chalk along the teeth before use. This prevents the metal shavings from getting packed into the teeth.