



### WHAT IS A FILE?

*A file is a precision, hand cutting tool, designed to remove stock, sharpen tools and produce a variety of finishes on many different types of material.*

*The two most common types of files are:*

- 1. Machinists' Files (Engineers' Files) - Designed for fast removal of all types of metal*
- 2. Tool Sharpening Files (Saw Files) - Designed for sharpening saws and dressing edged tools*

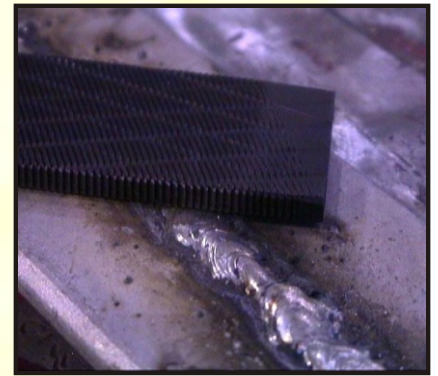
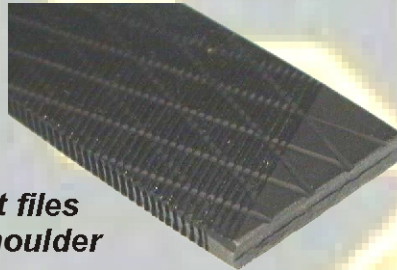
### WHAT IS THE BEST FILE FOR MY APPLICATION?

*There are many types of files. Knowing which file to use for any given application is key to making your job easier and prolonging the effectiveness of your file. Selection of the proper file is based on its shape, the desired finish, and the type of material being removed.*

### STYLES AND USES

#### D-Cut

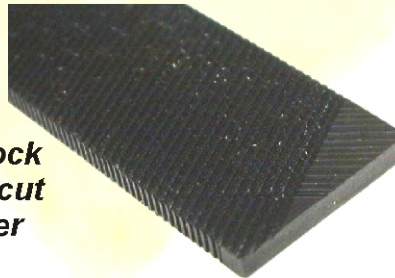
*Design: Single cut coarse tooth with a diamond-shaped pattern on both sides. The "double chip breaker" diamond pattern leaves a smooth finish and allows for fast stock removal. D-cut files have one single cut tiny edge for shoulder filing.*



**Applications:** Designed to cut brass, plastic, steel, cast iron, and many others. D-cut files can be also used to file down welds.

#### Flat Bastard

*Design: Coarse tooth, and double cut on both sides for rapid stock removal. These files have one single cut edge for shoulder filing. The files taper toward the point.*

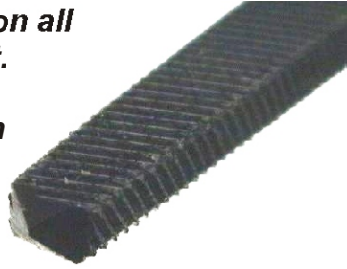


**Applications:** Designed to cut cast iron, brass, aluminum alloy, copper, hard rubber, steel, and many others.

### Square Bastard

**Design:** Coarse tooth, and double cut on all four sides. Files taper toward the point.

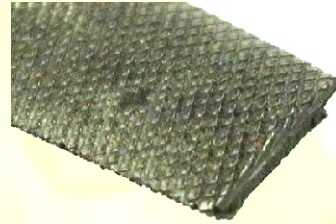
**Applications:** Designed to cut cast iron keyways, spines, square holes, and slots.



### Half Round Bastard

**Design:** Wavy coarse tooth double cut pattern on the flat side. The round side has a spiral tooth pattern designed for a smooth, rounded finish. Spiral pattern eliminates having to roll your wrist.

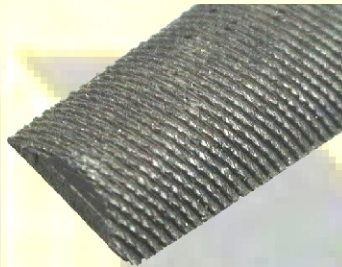
**Applications:** Designed to cut cast iron pipe fittings. Used to cut out concave surfaces and also to round out holes.



### Round Bastard

**Design:** Coarse tooth double cut with a spiral tooth pattern. These files taper toward the point.

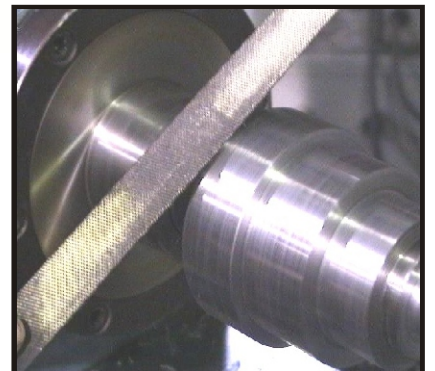
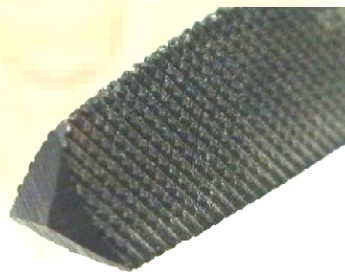
**Applications:** Designed to cut cast iron and annealed steel alloy. Used for enlarging circular holes and round grooves when a half round bastard files to large.



### Triangular Bastard

**Design:** Double cut coarse tooth on all three sides. Files taper toward the point. All three angles are 60°.

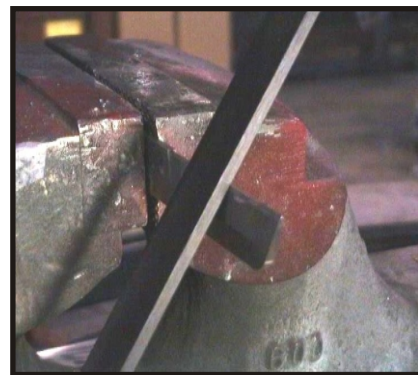
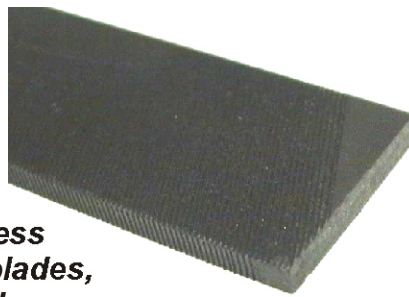
**Applications:** Used for filing internal angles and for cleaning out square corners when a flat file is unable to reach.



## Mill

**Design:** *Single cut on both sides. Files have one single cut edge for shoulder filing. Mill files are slightly tapered to the point.*

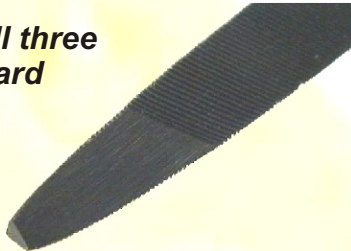
**Applications:** *Used to sharpen stainless steel mill saws, shears, lawn mower blades, circular saws, axes, and farm tools. These can also be used for lathe work and general filing.*



## Taper

**Design:** *Single cut on all three sides. All three edges are cutting edges. Files taper toward the point.*

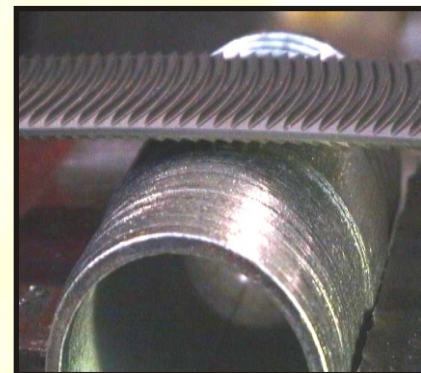
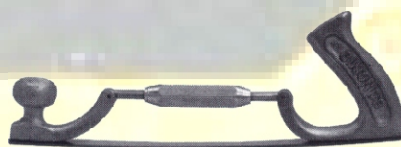
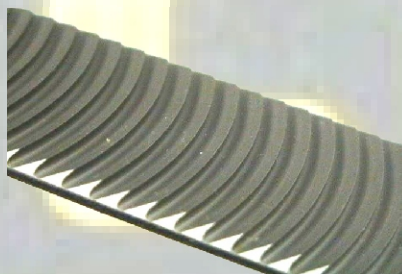
**Applications:** *Used to sharpen steel saws. These include hand saws, circular saws, cross-cut saws and bucksaws.*



## Flexible Vixen

**Design:** *Milled curve-tooth face on both sides. This makes for fast stock removal and leaves a very smooth finish.*

**Applications:** *Used to file aluminum, sheet metal and are also designed to be used in auto body work. Flexible vixen files can be used to file flat, convex, and concave surfaces when used with a Vixen file handle.*



## Ignition Files

**Design:** *Fine tooth single cut on both sides.*

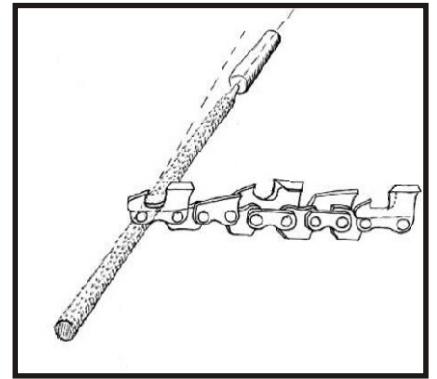
**Applications:** *Used to clean spark plugs and dress contact points. Also used to smooth out the electrode in a spark plug with an ignition file.*



### Round Chain Saw

**Design:** Has a single cut pattern. Files maintain tooth shape and leave a smooth cutting edge.

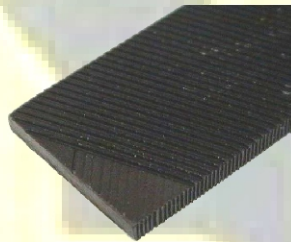
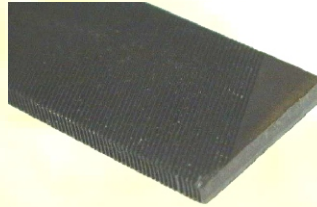
**Applications:** Used to sharpen round-hooded chain saw teeth.



### General Purpose

**Design:** Double cut pattern on one side and a single cut pattern on the other. This provides maximum versatility for different types of applications. These files have one single cut edge for shoulder filing.

**Applications:** Used for a wide range of applications including cutting brass, steel, cast iron, copper, and bronze.



### FILE FACTS

- **A file cuts only in one direction**
- **File patterns affect the amount of material removed**
- **Correct file strokes can blend over a welded hole**
- **Too much pressure causes the file to fail prematurely**
- **Stroke speed affects the surface finish**

## FILE NOMENCLATURE

**Tang** - the pointed part of the file that is inserted into the file handle

**Heel** - the part of the file that comes next to the tang - also known as the shoulder

**Point** - the end of the file opposite the tang

**Length** - the distance between the point and the heel - also known as the body

**Teeth** - the cutting ridges on the file's surface

**Side** - the wide file surface - used for most filing

**Edge** - the narrow file surface - may be round or square in shape

**Back** - the rounded side of all half-round files

**Safe** - refers to an edge or side with no teeth cut

