

# PENTURNING 101: Pen making basics you need to know to get started

Pen making is an exciting and satisfying hobby. There are many different kits, styles, platings and materials and it can be a little overwhelming when you are first getting started.

## Styles and platings

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There are three basic pen styles to choose from: ballpoint (twist and click), rollerball and fountain pens.



**Twist pens** have a mechanism that extends the ballpoint refill forward. Because of their lower cost, these are usually the kits most people use when getting started.



**Rollerball pens** come with a removable cap and have a superior refill that writes more smoothly than a ballpoint.



**Fountain pens** are a more upscale style and have an ink cartridge, nib and removable cap. Most kits will come with an ink refill cartridge or an ink pump, as well as a medium nib.

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## What you need to make a pen

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### Tools

You must have a lathe, drill press and a saw to cut the blanks to the right length. A typical pen turner's chisel set includes a small gouge, a skew and a parting tool.

### Pen kit

You'll need a pen kit, which includes all the components necessary to make the pen, with the exception of the blank.



### Bushings

Bushings are mounted on the mandrel and serve as a guide to the finished outside diameter of the pen.

### Drill

You'll need the drill of the correct size to match the barrel or barrels for the pen style you have chosen. Some pens require two drills because the upper and lower barrels are different sizes.

## Mandrel and arbor

A mandrel is the steel rod onto which you mount your bushings and blanks to turn them on the lathe. A Morse Taper (MT) arbor fits into the headstock of the lathe and the mandrel slides into the arbor, which holds it in place. Some lathes are an MT1 size but most are an MT2. The hole in your headstock measures approximately 3/4" for MT2 and 1/2" for MT1.



## Blanks

The blank makes up the body of your pen and can be of wood, acrylic or any other exotic material you choose.



## Pen mill and pilot shaft

To square off the ends of the blank once you have drilled a hole lengthwise through it and glued a brass tube inside, you need to use a pen mill shaft and cutter head. This ensures you don't have any gaps between the blank and the pen hardware pressed up against it when you assemble your pen.

## Glue

You'll need to glue the brass pen tube into the blank. Two of the most popular glues are thick CA (cyanoacrylate) and two part epoxy.

## Abrasives

Sandpaper is needed to sand down your blanks after turning before applying finish. Start at 120 and go up to at least 400 or 600 grit. For a smooth finish, you can use Micro Mesh which comes in grits from 1,500 to 12,000.

## Finishes

Some of the easiest finishes to use when you're beginning are wax bars or friction polishes, like Mylands or Shellawax. They are applied to the sanded blank as it is spinning on the lathe. There are many different types of finishes and each turner will develop his or her own favourite.

## Accessories

Once you have the basics covered, there are many different accessories available to help you improve your skills as you get deeper into penmaking - like pen blank centering vises, assembly presses, boxes and pouches, different nibs and refills, display cases and replacement tubes.

## Pen families, bushings and drills

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Most people start with a simple, inexpensive twist pen kit. As the skill level increases, you'll want to try new kits, which often require different drills and bushings. This is because as the size of the pen increases, so does the barrel. The outside diameter of the barrels will also vary according to the size, which means you need different bushings and drills. Our beginner starter kit is a great way to get started.