

## Stylus Twist Pen

code: 503499

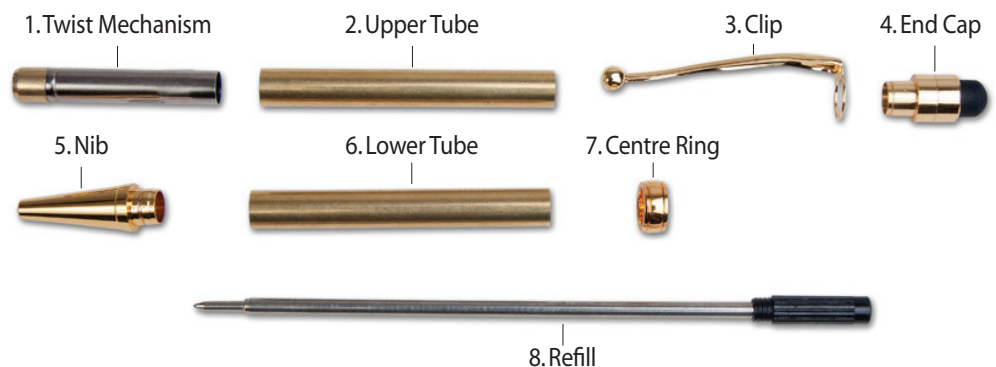


### Kit Includes

1. Twist Mechanism
2. Upper Tube
3. Clip
4. End Cap with Rubber Tip
5. Nib
6. Lower Tube
7. Centre Ring
8. Refill

### What's Required

- Pen Mandrel
- Suitable blank 16 x 16mm
- 7mm Drill Bit (code: 502103)



## Preparing the Material Blanks

**1.** Cut the blanks about 1/8" longer than the brass tubes to allow for trimming. Maintain grain orientation of the two blanks for turning on a mandrel by placing an "x" on either side of the cut line.

**2.** Drill the blanks with a 7mm drill bit at a speed of 900 to 1200 RPM.

**3.** Roughen the brass tubes with 220 grit sandpaper to remove oxidation and prepare the tubes for gluing. This can be done by hand or by chucking them in a drill press or portable hand drill.

**4.** Prepare to glue with medium CA (cyanoacrylate) glue or two-part fast drying epoxy.

**5.** Apply the glue to the outside of one tube with a liberal amount around the tube end that is inserted first. Do not apply glue to the inside of the blank, as this will cause the glue to get inside the brass tube and ruin the tube.

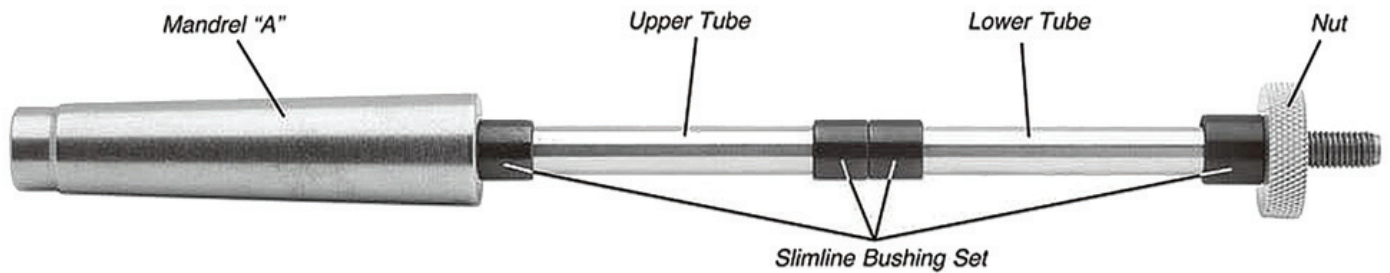
**6.** Insert the tube with a twisting motion into the blank until the tube is equidistant between both ends of the blank. Wipe off any excess glue on the ends of the blank. Allow the glue to dry. Glue the second tube using the same method.

**7.** Using a barrel trimmer, disc, or belt sander, trim the ends of the blanks until you can just see the bright brass ends of the tubes. The faces of the ends must be perpendicular to the brass tubes and parallel with each other. It is imperative to match the length of the trimmed blanks to the original length of the brass tubes and that the insides of the brass tubes are clean and free of any glue.

## Turning the Blanks

1. Assemble the blanks on the mandrel with the bushings placed as shown in the picture above. Keep the grain orientation of the blanks in line when mounting. Note that all of the bushings are the same size.
2. Tighten the tailstock and then tighten the mandrel nut that holds the blanks. Do not over-tighten the tailstock or mandrel nut as this may cause the mandrel to flex, causing the blank to go out of round.
3. Turn the blanks to the desired shape, making sure that the surfaces adjacent to the bushings are turned to the same diameter as the bushings.

4. After turning, sand the surfaces in progressive steps of 220, 400, 600, and 1000 grit. If a higher finish is desired, micromesh sandpaper may be used.
5. Apply the finish of choice and polish.
6. Remove the blanks from the mandrel, keeping the blank orientation and grain patterns in line.



## Assembly

Read the assembly instructions completely before assembly.

1. Press the tip into the end of the lower tube. Make sure you choose the appropriate end of the tube to preserve the pattern or grain match for your pen.
2. With the threaded end exposed, press the twist mechanism into the other end of the lower tube, up to the indentation ring. To determine if the twist mechanism is positioned to the correct depth, thread the ink cartridge into the twist mechanism. When properly fitted, approximately 1/8" of the writing point shows when the mechanism is twisted open, and is covered when the mechanism is twisted closed. If the point does not extend far enough, remove the ink cartridge and press the twist mechanism farther into the tube. Be careful not to press it in too far as the twist mechanism cannot be pulled back out.

3. Slide the centre ring over the twist mechanism.
4. Slide clip onto the stepped end of the soft stylus tip. The clip will only slide on a short distance until pressed into place. Do not attempt to force the clip all the way onto the tip by hand as this may damage the parts.
5. Press the stylus tip assembly into the far end of the upper tube using a suitable spacer block with a hole bored in it. This is so that the soft stylus tip is not damaged by compression during assembly. Note: Make sure you choose the appropriate end of the tube to preserve the pattern or grain match for your pen.
6. Thread the ink cartridge into the twist mechanism, then gently push the upper and lower assemblies together.

