

DP-4070

CARBATEC DESK PEN KIT

INSTRUCTIONS



A. REQUIRED SUPPLIES

- 7 mm drill bit, PK-7MM
- Blank: $\frac{3}{4}$ " square x desired length
- Pen mandrel: MAND-92
- Bushings: PKM-BUSH3
- Epoxy glue or CA super glue (Cyanoacrylate)
- Sanding and finishing supplies
- Drill or drill press
- Barrel trimmer / disc sander
- Pen press or clamp
- Eye and ear protection

B. PREPARING AND TURNING THE BLANK

1. Cutting the wood or acrylic blank

Cut the blank to $\frac{3}{4}$ " square and 1" longer than the desired finished pen length. The grain should run lengthwise.

2. Drilling the blank

Drill a 7 mm hole (2- $\frac{1}{4}$ ") deep into the writing end of the blank. Excessive pressure will cause the drill bit to wander and/or split the blank. Slow the feed rate and back the bit out repeatedly for chip removal.

3. Inserting plug part into brass tube

Press the plug pen part into one end of the brass tube until it sets flush with the end of the brass tube.

4. Gluing the brass tube into the blank

Use epoxy or a gap filling Cyanoacrylate. Spread the glue on the tube. Insert into the blank with a twisting motion to spread the glue evenly inside. Centre the tube lengthwise in the blank. Allow the glue to dry. Remove all glue residue from the tube.

5. Squaring the ends of the blank

Use a barrel trimmer to turn away the excess wood to finish flush with the ends of the brass tube.

6. Turning the blank

- Mount the mandrel into the headstock of your lathe. Adjust the mandrel length by using the brass nut provided or using a spacer; allow the distance be 2- $\frac{1}{4}$ " plus bushing, then slide the bushing onto the mandrel.
- Slide the prepared blank onto the mandrel and up against the bushing.

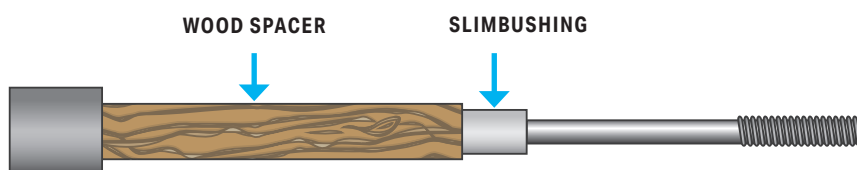


Fig. 1

- Slide the tailstock and revolving centre up against the end of the blank.
- Turn the pen between centres to the desired shape, leaving a small tenon between the top of the pen and the revolving centre.

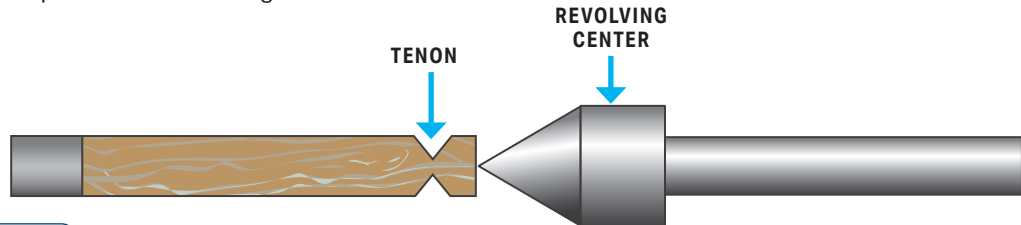


Fig. 2

7. Sanding the blanks

Remove the pen from the lathe and cut off the tenon. As with any sanding, progress through a range of lower to higher grits of sand paper.

8. Finishing

Sand the blank using progressively finer grits of sandpaper, then apply the finish. Remove the pen from the lathe and cut off the tenon. Sand and finish the area where the tenon was cut.

B. PEN ASSEMBLY

1. Lay out the parts as shown. Use a vise or clamp with wood or plastic jaws to prevent damaging parts during assembly.
2. Screw the threaded bushing onto the writing tip.
3. Gently press the tip assembly into the brass tube.
4. Unscrew the writing tip from the threaded bushing and drop the spring into the tube.
5. Slide the refill into the tube and screw the writing tip back into the threaded bushing to complete the pen.

C. PEN REFILL

The desk pen uses Carbatec Desk Pen Refill #DP-4070-REFILL that has been cut down in order to fit the desk pen body.

1. If you have a normal plastic tube ball point refill, cut the refill with scissors to 2-1 $\frac{1}{16}$ " long. Clean the excess ink off the scissors and end of the refill.
2. With the end of a paper clip or the tip of a toothpick, clean out the cut end of the refill about 1/4" deep. This will prevent the ink from leaking out of the cut end.

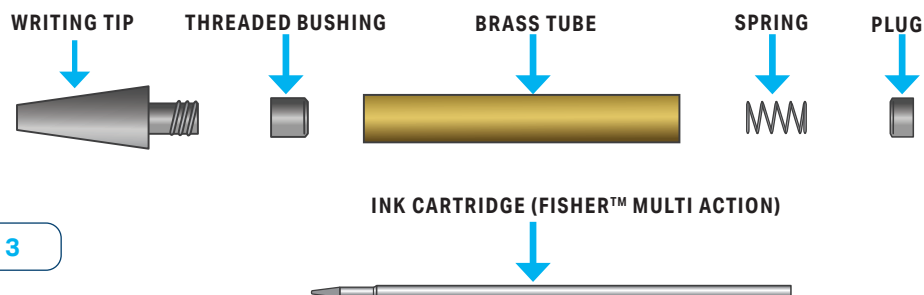


Fig. 3