

PROTURA TWIST PEN

Kit Features

- Easy to Turn with Straight Tubes
- Minimal Parts--easy to assemble
- Available in multiple finishes
- Overall Length: 5-1/16"

Required Accessories

- 7mm Pen Mandrel
- Drill Bit: #PK-38BP for Wood, #PKEXEC-38 for Plastic
- Bushing Set(2pc): # PKNBU
- Barrel Trimming: #PKTRIM38 or 3/8" sleeve from #PKTRIMSET with squaring jig on disc sander
- Live Tailstock or Mandrel Saver
- 2 part Epoxy or Thick CA (Cyanoacrylate) Glue
- Pen Blank Minimum Size: 5/8" x 5/8" x 2-15/16"L

Preparing the Blank:

- Prior to cutting and gluing, always verify tube length is correct (see parts diagram on back page)
- Cut blank to the length of the tube, adding 1/16" for squaring off.
- Drill 3/8" hole lengthwise through the blank.
- Spread glue over tube, insert the tube into the blank while twisting to spread the glue evenly inside.
- Center the tube lengthwise inside the blank.
- When the glue is dry, square the ends of the blanks, making sure the trimmed ends are 90° to the tube. Use a 3/8" Barrel Trimmer or 3/8" barrel trimming sleeve with a pen blank squaring jig on a disc sander. Take the excess material down flush to the ends of the tubes. Do not trim past the end of the tube since this may interfere with assembly and the operation of the mechanism. Use a barrel trimmer to clean the inside of the tube.



DIAGRAM B / TURNING THE BLANK



Turning the Blank:

- Mount the bushings and blanks according to diagram B.
- When using Mandrel Saver, there is no need for extra spacer bushings or the knurled nut. Slide and lock tailstock directly against bushings and tighten quill until blank and bushings are secure.
- To use Knurled Nut Setup (right), add spacer bushings until past the threads on the end of the Mandrel Shaft.
- Thread on the Knurled Nut and hand tighten to hold all components in place.
- Slide the Tailstock up snugly against the Mandrel shaft, inserting the live center point into the Mandrel dimple.
- Lock Tailstock and hand tighten the quill adjustment with wheel to steady the mandrel. Do not over-tighten, it could damage mandrel shaft.
- Using sharp tools, turn the blank down close to the bushing diameter. Turn the barrel straight or to a profile of your choice.
- Sand the blank down to be flush with the bushings, gradually increasing sandpaper grits.
- Finish the barrel using your choice of polish. Allow sufficient time for the polish to cure—refer to polish manufacturer's instructions.

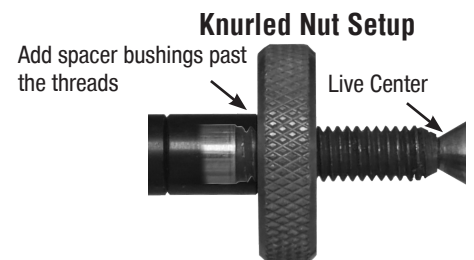


Diagram C / Bushing #PKNBU

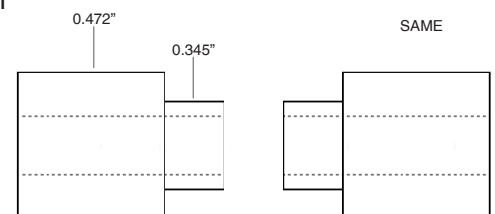
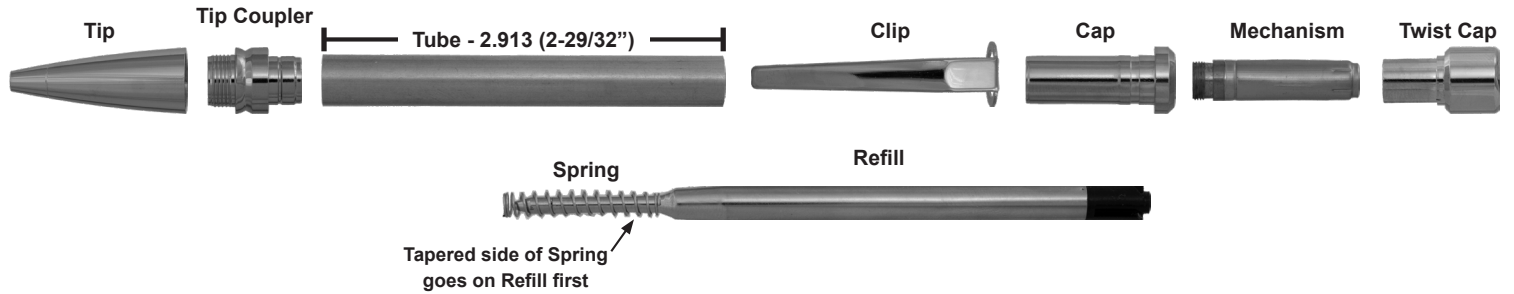


Diagram D / Parts Layout

**Assembly:**

- Press Tip Coupler into either end of the Barrel.
- Slide Clip onto Cap and press Cap into remaining, open end of Barrel.
- Thread mechanism into the Cap. Note that Mechanism has to go very far in to thread fully. Gently place Twist Cap onto back of Mechanism—just enough to grab it—and use the cap to turn the Mechanism until it is fully tightened.
- Push Twist Cap by hand onto Mechanism until fully seated.
- Slide Spring, tapered side first, onto Refill shaft. Spring should grip the shaft and not fall off by itself.
- Insert Refill, back end first into the opening in Tip Coupler.
- Slide Tip over Refill and thread onto Tip Coupler.
- To extend and retract Refill, turn the Twist Cap back and forth.
- To change Refill, unthread Tip from Tip Coupler. Remember to switch Spring to new Refill.

