# **Steampump Pen Kit**

### **Kit Features:**

- Unique Clockwork Design
- Pump Action Click Mechanism
- · Easy to Turn with Straight Tube
- · Minimal Parts--easy to assemble
- · Available in multiple finishes
- · Overall Length: 5-5/8"
- USES REFILL: #PKPARK-R5

## **Required Accessories:**

- 7mm Pen Mandrel
- Drill Bit: #PK-10MMSG for Plastic or #PK10-10 for wood
- Bushing Set (2 pc): #PKSPBU
- Barrel Trimming set: PKTRIM10 or 10MM sleeve and #PKSQUARE Squaring Jig for Disc Sander
- · Live Tailstock or Mandrel Saver
- 2 part Epoxy or Thick CA (Cyanoacrylate) Glue
- Pen Blank Minimum Size: 3/4" x 3/4" x 2-1/4"L



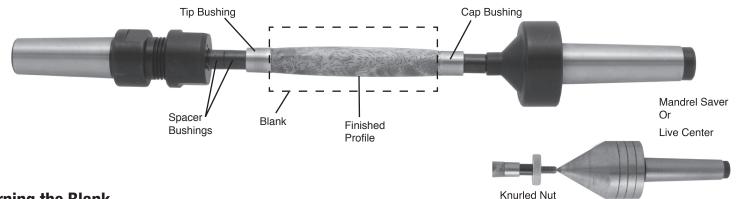
## **DIAGRAM A / PARTS LAYOUT**



## **Preparing the Blank:**

- Cut blank to the length of the tube, adding 1/16" for squaring off.
- Drill 10MM hole lengthwise through the blank.
- Spread glue over tube, insert the tube into the blank with a twisting motion to spread the glue evenly inside.
- Center the tube lengthwise inside the blank.
- When the glue is dry, square the ends of the blank, making sure the trimmed ends are 90° to the tube. Use a 10MM barrel trimmer, or a pen blank squaring jig with 10MM sleeve 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 the operation of the mechanism and assembly. Use a barrel trimmer to clean the inside of the tube.

#### DIAGRAM B / TURNING THE BLANKS



## **Turning the Blank**

- · Mount the bushings and blanks according to diagram B.
- 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.
- Hand tighten the quill adjustment on the tailstock to steady the mandrel. Do not over tighten, it could damage the mandrel shaft.
  When using Mandrel Saver, there is no need for extra spacer bushings or the knurled put. Slide tailstock directly against bush-
- When using Mandrel Saver, there is no need for extra spacer bushings or the knurled nut. Slide tailstock directly against bushings and tighten until blank and bushings are secure.
- 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 instructions.

## **Assembly**

- Lay out parts according to Diagram A.
- Press Tip Nut into the smaller end of the Barrel recessed side of Tip Nut must go into tube first.
- Use the slot in the back end of the larger bushing to press the Upper Assembly into the larger end of the Barrel. (Do Not Press directly on pump handle or dis-assemble the Upper Assembly to press)
- · Slide Refill into open end of the pen and put spring over refill shaft
- · Thread tip over Refill and Spring.
- To extend and retract pen, either lift Pump handle out from pen or push down on top curve of Pump handle.
- To change the refill, unscrew tip and replace. Be careful switch extender and not lose spring when transferring to new refill.

## Diagram C / Bushings #PKSPBU

