

GROOVE TWIST PEN KIT

Kit Features:

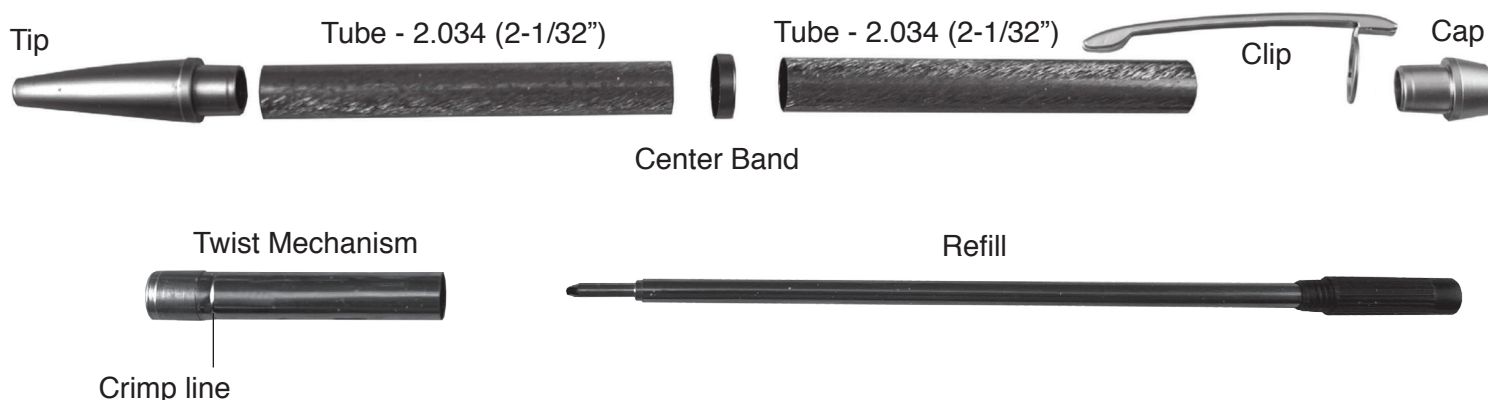
- Modern, Thin Design
- Easy to Turn With Straight Tubes
- Minimal Parts--easy to assemble
- Integrated clip/cap assembly
- Available in multiple finishes
- Overall Length: 5-17/32"
- Uses Cross® Style Refill: #PK-PEN-R5

Required Accessories:

- 7mm Pen Mandrel
- Drill Bit: #PK-7MMSG for Plastic or PK-7MM for Wood
- Bushing Set(3 pc): #PKM-BUSH3
- Barrel Trimming set: #PKTRIM7 or Squaring Jig and 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 4-5/16"L

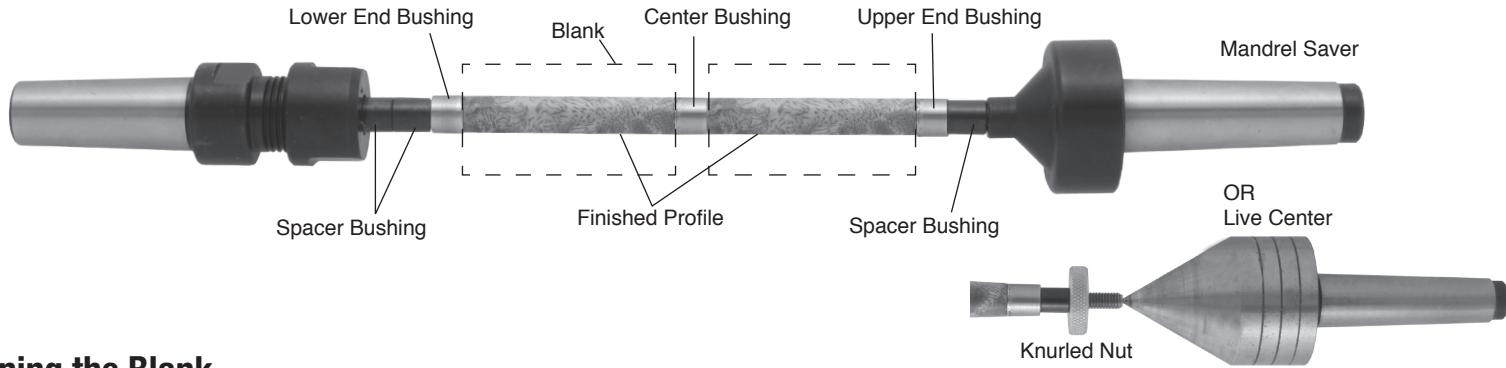


DIAGRAM A / PARTS LAYOUT



Preparing the Blank:

- Cut blanks to the length of the tubes, adding 1/16" for squaring off. Mark Blank before cutting to keep grain matched.
- Drill 7mm hole lengthwise through the blanks.
- 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 blanks, making sure the trimmed ends are 90° to the tube. Use a 7mm barrel trimmer, or 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 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. Make sure blanks are oriented to match grain.
- 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 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

- When removing Barrels from lathe, be sure to keep track of blank orientation to match grain when assembling. Choose one blank to be the Lower (tip) side and the other will be the Upper (Clip) side.
- Press Tip into one chosen front end of Lower Barrel.
- Press front of Mechanism (brass end) into open of lower barrel to the crimp line.
- Thread Refill into back of mechanism and test refill extension by twisting mechanism. Mechanism can be pressed in further if a longer extension is desired. Be very careful not to press mechanism in too far.
- Slide Centerband over back of Mechanism.
- Press Cap through Clip into chosen back end of Upper Barrel.
- Slide open end of Upper Barrel over back of Mechanism and close gap to Centerband.
- To extend and retract Refill twist the Upper and Lower Barrels
- To Change Refill, pull Upper Barrel off of Mechanism, unthread Refill and Replace with new.

Diagram C / Bushings #PKM-BUSH3