

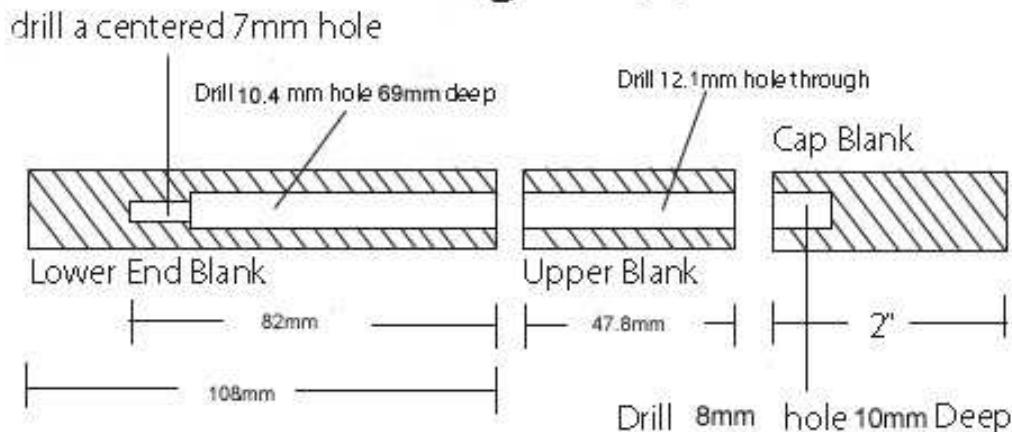
Semicircular Rollerball & Fountain Pen Kits

Required Accessories:

- Big Grabber pen mandrel system
- 10.4mm drill bit RZ-DB104
- 12.1mm drill bit RZ-DB121
- Bushing set RZ-RP179#-BU
- Barrel trimmer sleeves(use with 7mm trimmer)
- 10mm drill bit
- 7mm drill bit
- Glue (Thick CA or Epoxy)
- Project requires 2 pen blanks



Diagram A



Preparing the Blank: (Diagram A)

- Cut 3 blank sections

LOWER END BLANK:

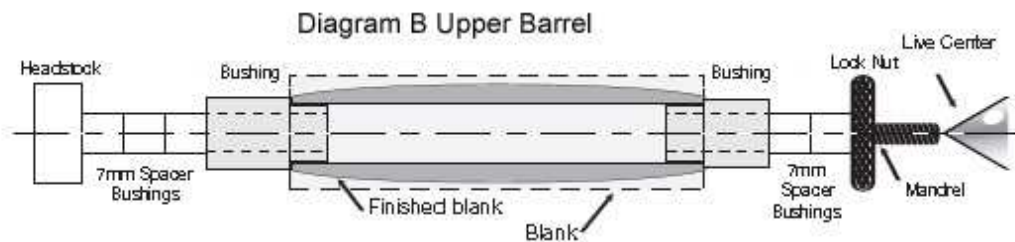
- Mark the center of the blank on both ends.
- Drill a 10.4mm hole, 69mm deep.
- Drop the counter sink bushing, chamfered side up. Drill a 7mm hole through, 82mm deep. (see Dia. A)
- Press the end cap insert to the tube first and then glue the tube into the hole, let dry.
- Use a sander (the hole is too short for a trimmer shaft) sand the end square.

UPPER BLANK:

- Mark the center and drill a 12.1mm hole through the blank.
- Glue the upper tube into the hole, center in the blank. Let dry.
- Use a trimming sleeve with a 7mm barrel trimmer shaft to square both ends of the blank.

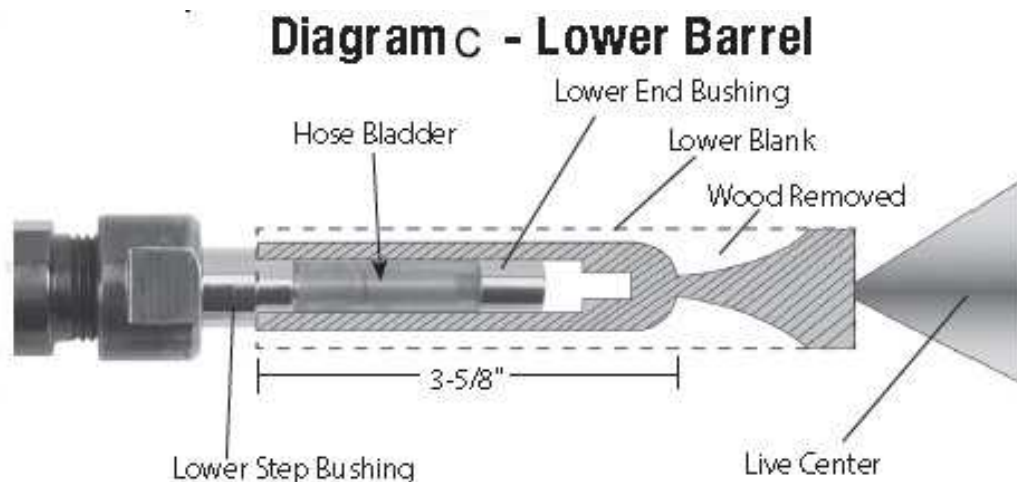
CAP BLANK:

- Drill a hole to fit the bulge part of cap connector.
- Squeeze glue drops into the hole, slide the cap connector with the washer into the hole. Let dry.
- Use a sander to square the end over the insert.



Turning the Upper Barrel see Diagram B

- Place 7mm spacer bushings onto the mandrel followed by cap bushings and centerband bushings, wide end in first, then the wood blank followed by the other end bushing, narrow end in first.
- If necessary, use additional spacer bushings to fill the space on the shaft up to the threads.
- Thread on the lock nut and hand tighten to hold all items in place.
- Slide the tailstock to the mandrel shaft, (do not overtighten, it could damage the mandrel). Lock in place.
- Turn the wood down flush with the bushings using the lathe tools, gradually increasing the grades of sandpaper.
- Finish the barrel with your choice of polish. Allow sufficient time for the polish to cure.



Turning the Lower Barrel see Diagram C

- Insert the lower step bushing, the bladder and screw the 10.4mm end bushing over the mandrel shaft.
- Slide the blank over, to bottom. Expand bladder with lock nuts.
- Attach the mandrel into the taper of the lathe. Bring the tailstock over so the live center support the blank. Lock set up in place, ready for turning.
- Turn the blank down to the bushing at the front. Measure 3-5/8" as the end of the barrel and shape the end round as shown. Part off then sand off the end and finish the barrel manually.



Upper Barrel Assembly

- Press the clip into the cap connector and then press the cap assembly into one end of the upper barrel.
- Press the center band into the opposite end of the upper barrel.

Lower Barrel Assembly

- Press the coupler, recessed end first into the opening at the lower barrel.

FOR ROLLER BALL PEN

- Insert the spring into the recess in the bottom of the refill. Drop the refill into the opening at the lower barrel.
- Screw the tip over the refill.

FOR FOUNTAIN PEN

- Affix either the ink cartridge or fountain pen pump into the back of the nib assembly. The cartridge will supply the ink. The refillable pump will require an ink bottle to draw ink into the storage pump.

GENERAL

- Just screw on both ends