# Atrax rollerball/fountain pen





#### Needed:

Mandrel A, drills 10.5 mm and 12.5 mm, bushing 30A

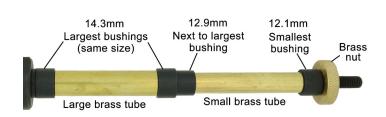
## **Preparing the blanks**

- 1. Cut the blanks the length of each brass tube, giving a little extra length for the facing of the blanks after the tubes have been glued in.
- 2. Drill the blank that will use the larger tube lengthwise with the 12.5 mm drill bit.
- **3.** Drill the blank that will use the smaller tube lengthwise with the 10.5 mm drill bit.
- **4.** Scuff the brass tubes with sandpaper to clean off the oxidation and give the glue a better adhesion surface.
- 5. Plug the tube ends with a material wof your choice we recommend baseplate wax to keep the glue from getting into the tube. Just push the ends of the tubes into a thin section of the material to form a plug. This is important: glue inside the tubes is a common cause of kit failure.
- **6.** Roll one of the tubes in the glue, coating the entire surface of the tube.
- 7. Insert the tube with a twisting motion until the tube is equidistant between both

ends of the blank. Repeat with the other tube.

- **8.** Set aside until the glue has had time to reach its maximum strength.
- **9.** When the glue has cured, use a hobby knife to remove the plugs from the ends.
- 10. Using a barrel trimmer of the proper size, or a jig and disk sander, square off the ends of the blanks until you can see bright brass tube. STOP at this point. Not having the proper tube length is another common cause of pen failure.

#### **Turning the blanks**



- **1.** Assemble the blanks on the mandrel referring to the diagram above.
- **2.** Turn the pen blanks to the desired shape using the bushings as a sizing guide.
- **3.** After turning the blanks, sand the surface in progressive steps until you get to 400 or 600 grit.
- **4.** If a higher gloss finish is desired, continue

- sanding with Micro Mesh through to 12,000 grit. Then apply a finish of your choice and polish.
- 5. Remove the blanks from the mandrel. It might be wise to mark the larger end of the smaller lower barrel, inside the tube, as there is only a slight difference in size between the top and bottom of this barrel.

## Assembling the pen

- 1. Please refer to the parts diagram below.
- **2.** Place the center band over the smaller, threaded end of the threaded insert.
- **3.** Press the center band/threaded insert assembly into one end of the cap blank.
- **4.** Slide the clip over the finial and press this into place on the other end of the cap. Be sure to orient the clip to your preference before pressing.
- 5. Assemble the stop ring onto the nib

- coupler, large side of the ring closest to the wood barrel.
- **6.** Press the coupler and stop ring into the larger end of the barrel blank.
- **7.** Press the blind end coupler into the other end of the barrel blank
- **8.** Screw the end cap into place.
- 9. If making the fountain pen
  - a. Choose the pump or cartridge and install it on the nib
  - b. Screw the nib into the nib end cap.
- 10.If making the rollerball pen:
  - a. Insert the spring into the barrel
  - b. Insert the refill into the barrel
  - c. Screw on the nib.
- **11.**Screw the cap on the pen you are finished.

