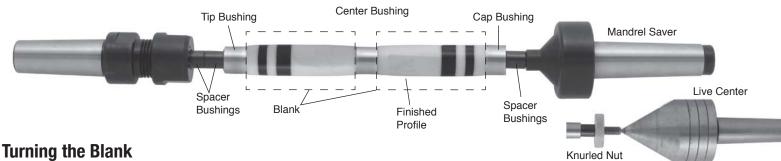


## **Preparing the Blank:**

- Cut blanks to the to the length of the tubes, adding 1/16" for squaring off.
- Drill a 10MM 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 10MM barrel trimmer, or a pen blank squaring jig with a 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**



- 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 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

- · Line up parts according to Diagram A.
- Press Tip Nut (shorter) into smaller diameter of lower barrel.
- Thread footballtip into tip nut.
- Align 50 yard line on center band with laces on tip.
- Press aligned center band into other end of lower barrel.
- · Thread mechanism onto the center band.
- Unthread tip and drop refill into opening in tip nut.
- Put spring on refill shaft (Check Diagram A for orientation).
- · Thread tip over refill.
- Press cap nut (longer) into larger end of upper barrel.
- Thread cap into cap nut through clip.
- Align cap & clip then push upper and lower barrel together by hand.
- To operate twist upper tube back and forth, this will advance and retract refill.
- To change refill, unscrew tip. Remember to switch the spring to the new refill.

*There are several methods to decorate a pen tube with players names and numbers. These include:* Decals, labels, stamps, photos, printed images off a computer. Regardless of the method you should follow these steps on wood and or plastic:

- Apply image to align with tip and band. Background color should match blank color as closely as possible (A clear "decal" or "cutting" out the figures is an option to eliminate this problem. Secure the image firmly to the blank and allow any adhesive to dry.)
- Seal over the image with a spray sealer, Mod Podge craft sealer or any glue that dries clear. Allow the sealer to dry completely.
- Use CA glue finishing techniques over the sealer to give a shiny, clear acrylic like seal over the image.

## **Diagram C / Bushings #PKFBALLBU**

