

Charnwood

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Instructions for Christmas Decoration Kits



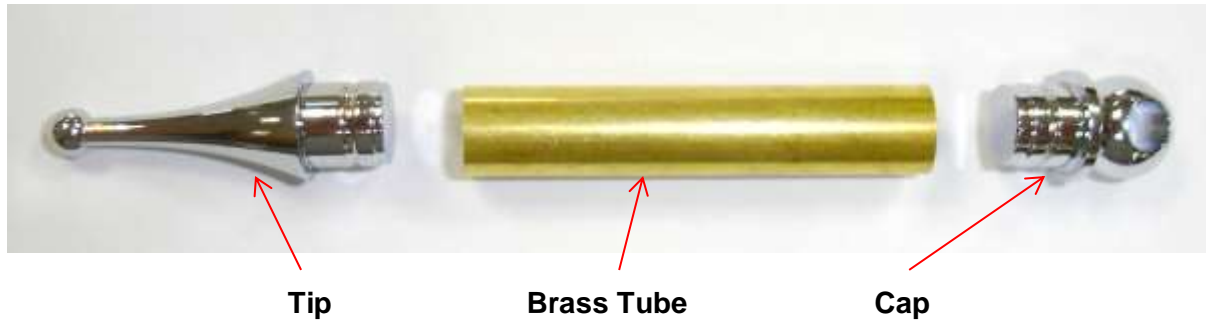
Kit Features

- Available in Chrome & Gold
- Overall length 65mm (2 1/2")
- Use with Acrylic or Wood
- Unlimited design variations possible
- No additional bushes required

Accessories Required

- 7mm Pen Mandrel (PM1MT or PM2MT)
- 7mm Drill Bit (PBD7)
- Barrel Trimmer with 7mm Shaft (PENBT)
- Adhesive – 2 Part Epoxy, Polyurethane or Medium Cyanoacrylate
- Blank of minimum length 40mm (4 1/2")

Diagram 1 – The Parts included in the Kit



Preparing the Blank

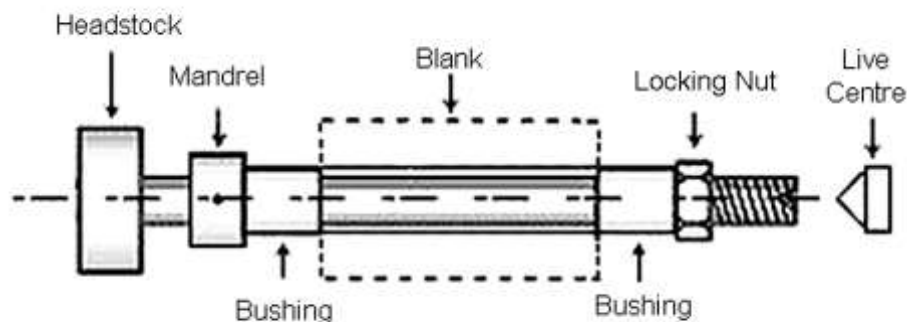
Step 1 – Cut the blank (wood or acrylic) to the length of the brass tube plus a small amount (approx. 2mm) for trimming. It is possible to increase the length of the ornament/blank by using more than one tube (Extra tubes are available PEN7T & PEN7MKT).

Step 2 – Drill a 7mm hole length wise through the blank. Use a slow speed and avoid using excessive pressure as this could cause the drill to wander or the blank to crack. Back out the drill regularly to clear chips and prevent overheating.

Step 3 – Roughen the outside of the tube/tubes with coarse (80g) abrasive. With your choice of epoxy, polyurethane or medium cyanoacrylate adhesive, cover the outside of the tube and insert into the blank using a twisting motion to ensure that the glue is evenly spread. If using a polyurethane glue, wet the inside of the blank before inserting the tube. Centre the tube lengthwise and allow to dry. When using more than one tube position each slightly in from end to allow for trimming. If using a translucent acrylic blank it is advisable to paint the inside of the bored hole or brass tube white as this will enhance its colour and prevent the tube being visible (white finish tubes are available PEN7TWH).

Step 4 – Using a Barrel Trimmer with 7mm shaft, square the ends of the blank 90 degrees flush to the ends of the brass tube. Alternatively this can be done using a disc/belt sander. Ensure that the inside of the tube is clear of dried glue. The use of a Tube Insertion Tool (PENTI) will minimise contact with the glue.

Diagram 2 – Mandrel Assembly



Step 5 – Mount the bushings and blank on the mandrel according to Diagram 2 and hand-tighten the lock/knurled nut to hold all components in place. If you plan to finish your pen with a varnish or CA, first apply a little paste wax polish to the bushings which will help prevent them from sticking. Slide the tailstock and live centre up to the mandrel & locate the point in the dimple in the end of the shaft. Lock in place and lightly tighten the quill to remove any play. Take care not to overtighten as this could bend the mandrel shaft.

Step 6 – Using sharp tools, turn down the blank to shape.

Step 7 – Reduce the speed of the lathe and sand the barrel. Abranet is the ideal abrasive as this does not clog.

Step 8 - A wood finish of your choice can then be applied. For a glass-like finish on acrylic, or wood with CA applied, continue sanding at a higher speed using Foam Backed Sanding Pads (PENSP) wet, through 1500,1800, 2400, 3200, 3600,4000, 6000, 8000 grits and up to 12000 grit.

Step 9 – Remove the barrel from the mandrel. Depending on the finish applied, it might be necessary to remove any overspill by lightly sanding the ends by gently twisting them on a piece of 120 grit abrasive placed on a flat surface.

Assembly

It is possible to assemble your pen using a suitably sized wood clamp, but this process is made much easier by using Pen Press Set (PP1MT or PP2MT) fitted to your lathe.

Step 10 – Line up and identify the finished parts according to Diagram 1.

Step 11 – Press the Cap into the top of the barrel.

Step 12 – Press the Tip into the other end, ensuring that it is aligned as pressure is applied.

The ornament is now complete and can be suspended through the hole in the cap.

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