

# Demonstration Notes for the Scottish Water Flask

These notes represent my interpretation of the making of a *functional* water flask. There are moments when alternative holding techniques, different tools and your preferred finish may be employed and substituted. By all means use the method that suits you best.

## Preparation

Start with a rectangular block of suitable hardwood. For a useable project to hold water (or alternative) I use BEECH. The original block is 9 $\frac{1}{4}$ " x 4" x 1 $\frac{1}{2}$ ".

Cut 2" off the block, cut this offcut into FOUR pieces 2 @  $\frac{3}{4}$ " x  $\frac{3}{4}$ " x 2" for the stopper and 2 @ 2" x 2" x  $\frac{3}{4}$ " for the sideplate. Discard one each of these smaller pieces.

Face the large block by glueing sacrificial pieces of softwood about  $\frac{3}{4}$ " thick to both large sides.

Mark centre of each end of the block then OFFSET by 1/8" towards one of the sides. Make sure this offset is towards *the same side* at each end.

Drill  $\frac{3}{8}$ " diameter hole vertically at one end centre to a depth of 2 $\frac{3}{8}$ " (i.e.  $\frac{1}{2}$  width of final piece add  $\frac{3}{8}$ " for wall thickness)

Mark vertical line and a horizontal line on the sacrificial side piece *opposite* the side you offset the end centres towards.

Using hot-melt-glue attach the sideplate to a scrapwood block to hold in 4 jaw chuck.

## Stage 1

Set up the block between centres such that the drilled hole is at the tailstock end in a revolving centre and the bottom of the flask is at the drive centre. I prefer to use a "steb centre" for this.

Use a spindle roughing gouge to bring the sides to a curve.

At the tailstock end produce a sweeping curve to a cove to form a neck and shoulder to the flask. Slightly hollow the opening to scoop to allow liquids to flow into the flask. Make sure the neck of the flask is of a smaller diameter than the thickness of the flask itself.

At the headstock end form a similar shoulder and sweeping curve to a foot. As much as the drive centre allows slightly hollow this foot.

Sand through grits, 100, 120, 180, 240, 320, 400, 600 as necessary all turned surfaces. Take great care sanding the intermittent sides. Apply sanding sealer and finish of choice. Carnuba wax is my preferred finish.

## Stage 2

Remove flask from lathe.

Attach 4 jaw chuck and set the sideplate for turning. Remove corners and turn to round with bowl-gouge.

Make sure the diameter of plate is suitable for the side of the flask. Create a flange at the edge of the plate about  $\frac{1}{8}$ " deep making sure the internal diameter suits your jaw set. Slightly hollow the internal face of the sideplate. Remove the sideplate from the glue chuck by parting away or melting the glue in a microwave. If you use the kitchen microwave for these events do not incur the wrath of the senior partner.

## Stage 3

Attach a faceplate to the side of the flask with the pencilled cross with screws and fix to lathe.

Using Bowl-gouge remove the sacrificial softwood and leave as flat and clean a surface as possible.

Using callipers to measure the inside diameter of the flange on the sideplate mark a cut-out hole on the side of the flask.

Using this marked circle hollow out the flask.

Using depth gauge frequently hollow to leave matching sidewall thickness PLUS additional sideplate depth. The depth of the diameter hollowing should be guided by the depth of the drilled fill/empty hole. When the hole is exposed the depth has been reached.

### **Stage 4**

Keep Flask on lathe and adjust hole to provide a tight jam-chuck fit.

With sideplate held in place complete outside turning with decoration of choice.

When you are happy with the shape sand all exposed surfaces to completion, seal and apply finish. Remove sideplate.

### **Stage 5**

Remove screws and faceplate. Reverse flask onto chuck to expand jaws into side recess.

Remove 2<sup>nd</sup> sacrificial softwood to leave exposed flask side.

With callipers set to outside diameter of sideplate mark side of flask.

Remove waste from side of flask to leave raised captive sideplate at same height as removable sideplate.

Turn captive sideplate to match profile, size and pattern as removable sideplate.

Sand, seal and apply finish to bare surfaces.

### **Stage 6**

Completely seal the inside of the flask with a minimum of two coats of sealer of choice including inside of sideplate and spout. I use polyester casting resin. Alternatives are; Rustins Plastic Coating (2 coats min.), Chestnut Melamine Lacquer (3 coats Min.)

When you are satisfied the inside of flask is adequately sealed and dry make up some sealer, pour this into the flask cavity, glue the sideplate into the recess using waterproof glue. Titebond III, Evo-Stik weatherproof (Blue bottle) Ensure complete ring of glue, wipe away excess. Now turn flask over, removable sideplate down and roll flask to ensure liquid sealer within the flask runs around the inside ring to complete the sealing process. Clamp, if necessary, leave to dry.

### **Stage 7**

Set the final piece of timber between centres and turn a suitable stopper making sure the stem is tapered from slightly under to slightly over  $\frac{3}{8}$ <sup>th</sup> inch to ensure a good fit. Sand, seal and apply finish. Drill hole to insert leather thong, tie around neck to finish.

These notes have been created as an *aide memoire* for those attending a demonstration by Colin Fishwick RPT. Because additional information and warnings are issued during the course of the demonstration they cannot be regarded as a complete set of instructions for the creation of the flask.

I would encourage everyone to try to create a similar piece. If you hit a problem, or get stuck, do not hesitate to contact me and I'll try to give you the benefit of my experience to solve the issue. Contact details are below. You could, of course, come on a course and learn to make one under my *expert supervision*. Course costs are £80.00 per day for one person, £70 each per day each for two, £60.00 each per day for three. Within one year of a demonstration at a club there is an additional 10% discount for club members. Accommodation can be arranged please call for costs and details.

### **Materials used in the demonstration**

I use native beech for this project. It is used freely for many kitchen items, breadboards, chopping blocks, ladles, spoons etc and can be regarded as food safe, It has a very close, dense fibre structure which is liquid proof on side grain. It can be sealed with a variety of substances on end grain. Other hardwoods can be used. I have tried cherry and sycamore. The cherry was not quite dry and the faceplate joint failed. Sycamore is more porous on the end grain. So more care was taken to seal the inside. Successfully. I have no connections with any of the following suppliers (excluding CamVac). Other than as a retail customer. Their details are included for information only. I cannot be responsible for any supply or transaction difficulties you may encounter with them.

1. I get my kiln dried beech from John Boddy's at Boroughbridge  
John Boddy's Fine Woods and Tool Store, Riverside Sawmills, Boroughbridge, North Yorkshire.  
01423323810. [www.john-boddys-fwts.co.uk](http://www.john-boddys-fwts.co.uk)
2. Abrasives from Alan Calders, Unit 10b Churnet Works, Macclesfield Road, Leek, Staffordshire.  
01538387738 [www.sandpapersupplies.co.uk](http://www.sandpapersupplies.co.uk)
3. Polyester Casting Resins from CFS. CFS Fibreglass Supplies, United Downs Industrial Park, Redruth, Cornwall. TR16 5HY. 01209822192. [www.cfsnet.co.uk](http://www.cfsnet.co.uk)  
Also digital measuring scales £6.00ish
4. Remote control sockets from Asda, Tesco, Morrisons £5.00 for three.
5. Evo-Stick from any DIY shed.
6. Rustins Plastic Coating, Chestnut Melamine Lacquer, Titebond III from Wood turning supplies; John Boddy's, Turners Retreat, Craft Supplies, etc.
7. CamVac extraction equipment and accessories up to £150 7½% off, over £150 12½% off. Free delivery.  
Call me
8. Leather from a chap on Newcastle-upon-Tyne Sunday morning Quayside market. Or a Cobbler

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