



Fun-to-make owls

Paul Howard shows how to create these delightful creatures

These owls are fun to make but do require a systematic approach. I make three, a family of them. The sizes I use are 95mm for the father owl, 75mm for the mother owl and 60mm for the baby owl.

For this project, based on ideas from Andrew Hall and a German turner by the name of Gunther, I will explain the processes involved in making the largest of the owls.

The processes are identical for each size and many people find working on a larger item first is easier and more forgiving of mistakes than working on a smaller item. It is important that you build in wiggle room for error. No one knows what size you

intended something to be except you. To be honest, the sizes are irrelevant as long as you have them proportionate to each other if you are making a family of owls.

This project requires that you turn a sphere about 100mm in diameter. This is a good starting size to learn to turn spheres and gives a bit of room for adjustment and errors so you end up with a sphere of 95mm or close to it.

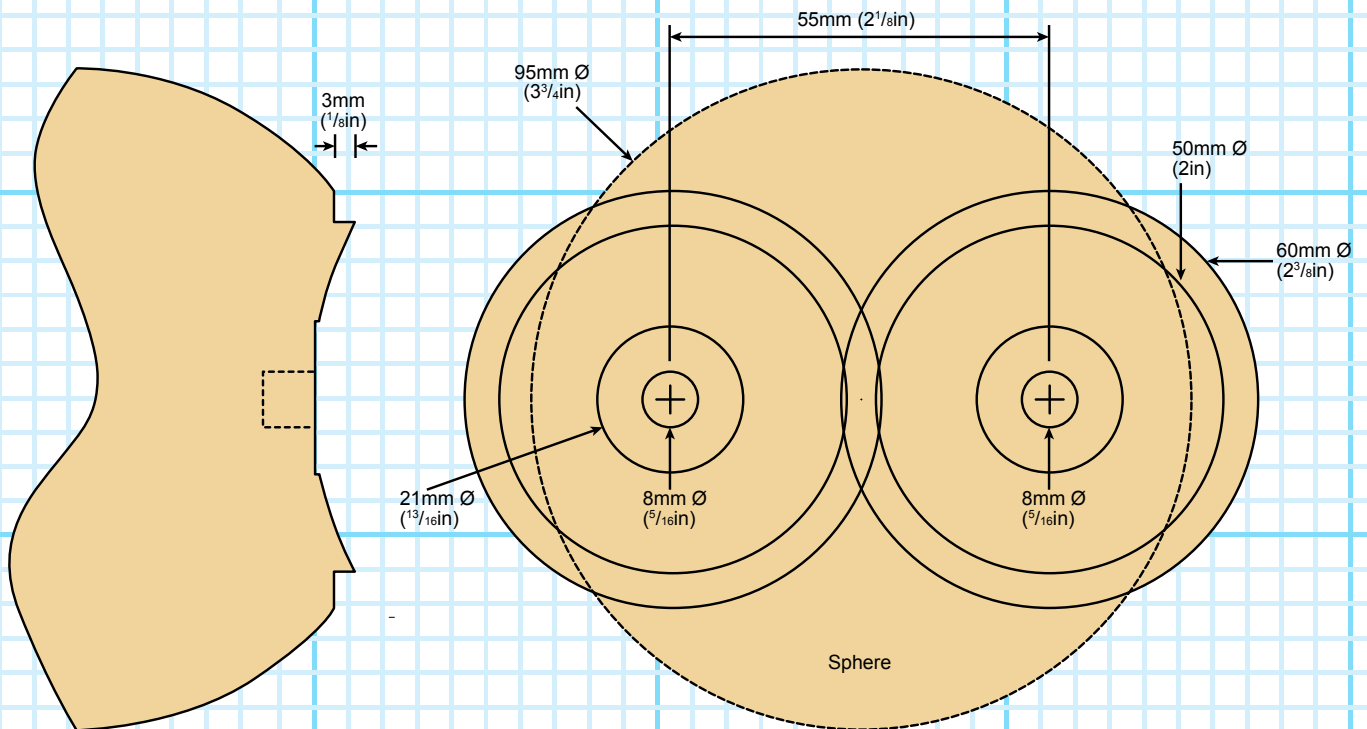
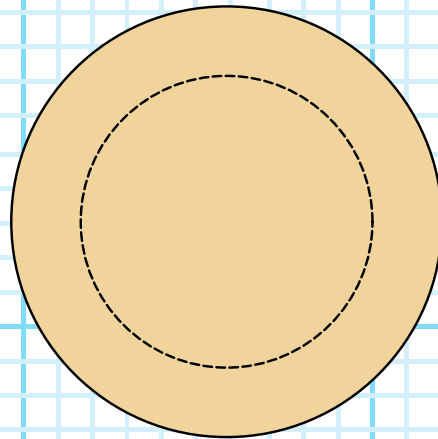
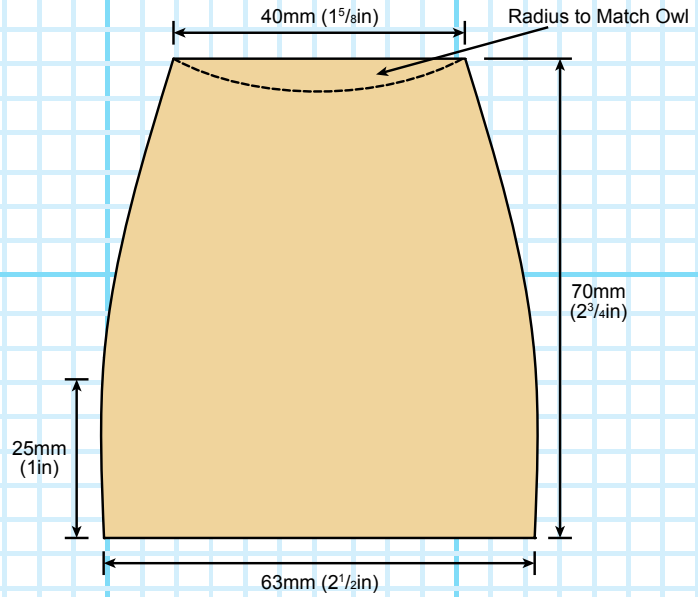
I will show some simple and effective chucking methods to help refine the shape of the sphere and also for holding the sphere when decorating the eyes. I hope you have fun making these.

Top tips

- Always check lathe speed before turning and err on the side of caution speed-wise, particularly when using jigs on the lathe.
- I make a plug gauge the same diameter as the eyes being used to test the fit after drilling.
- Do all the finishing before fitting the eyes.
- Adding hats adds a new dimension.
- Sharp tools are very important with any project, so remember to sharpen frequently.

TOOLS AND MATERIALS

- Personal and respiratory protective equipment
- Spindle roughing gouge
- Spindle gouge
- Scraper
- Beading and parting tool
- Dividers
- Chuck
- Drive spur
- Revolving tailstock centre
- Ruler
- V carving tool or router and V bit
- Router support
- Indexing system
- Disc sander with table
- Drill chuck
- Drill bit to suit eye insert
- Epoxy resin
- Finish of your choice
- Abrasive down to 600 grit
- 21mm Trimits Safety toy eye – amber
- 6mm thread inserts and roofing bolts
- Cup support for headstock and tailstock
- Timber of your choice:
- Owl head: 100 x 100 x 125mm long
- Owl body: 70mm x 70mm x 80mm long
- Beak: 20mm x 20mm x 70mm long



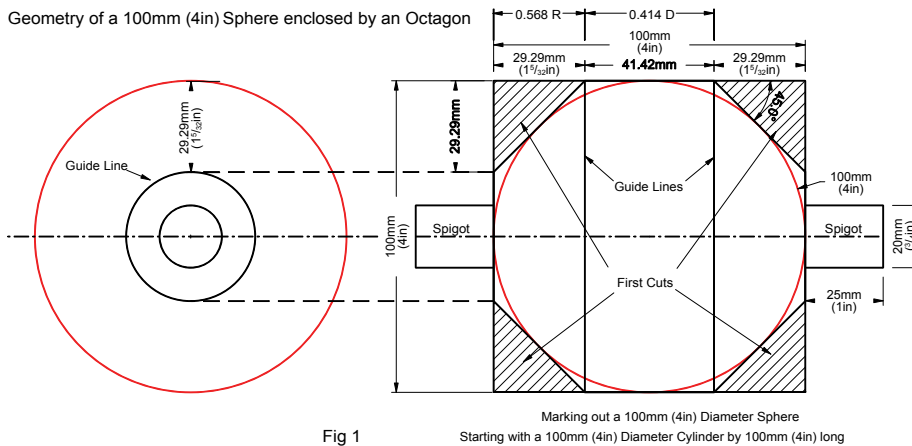
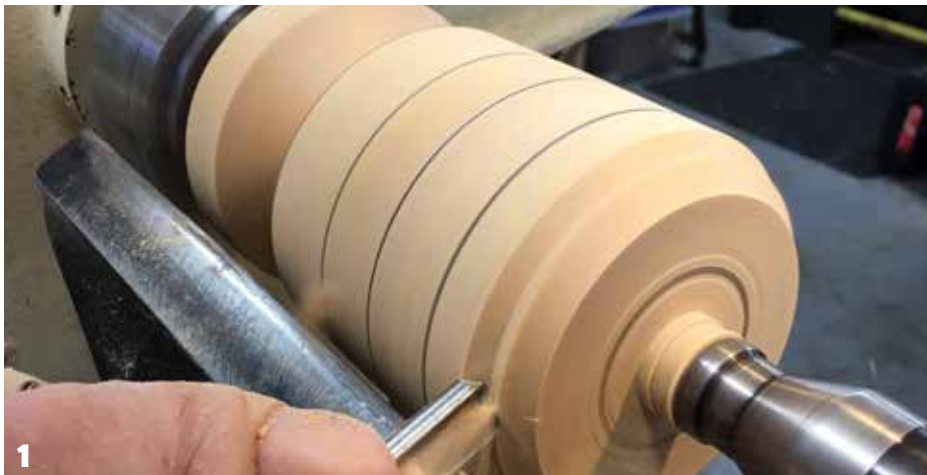


Fig 1



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Turning a sphere

1 Select timber just a little larger than the overall size required and cut to an approximate length of 125mm. Alternatively, cut a piece of wood 112mm long and glue on scrap blocks with hot-melt adhesive at each end, so you do not waste expensive timber. If you are using a jig to turn sphere, the latter method is better as you have more space to manoeuvre the jig in. For this method I would use scrap blocks 40mm x 40mm x 70mm in size. Ensure the hot-melt glue is at the correct temperature, apply glue in the middle of the marked section and then push the scrap block into place. Repeat for the other end.

Mount the wood in the lathe with the speed set at about 800rpm or a comfortable turning speed for you. To turn a 100mm sphere, measure and mark a 100mm-long section and mark the centreline of this around the cylinder. Turn down the waste ends at the end of the cylinder to cylinders of about 30mm diameter or to give you clearance to cut most of the sphere form shape. Now, multiply the diameter by 0.292 which = 29mm approximately. Mark a line in from each end and down on each side face so you can turn between these lines to remove the waste on each side of the sphere.

2 Gradually remove the timber using a gouge and scraper until you are close to the partial sphere shape required, but leave the centreline in place. Now turn the spigots to a slightly smaller diameter, tapering towards the sphere from each end.

3 Refine the sphere as much as you can using a combination of gouge and scraper and, if required, refine the shape further by taking a hoesaw mounted on a handle. The hoesaw should have teeth ground off so you have a flat edge at the opening, of the right size to suit your sphere, then manoeuvre this across the surface to highlight any anomalies to help you achieve an even shape.

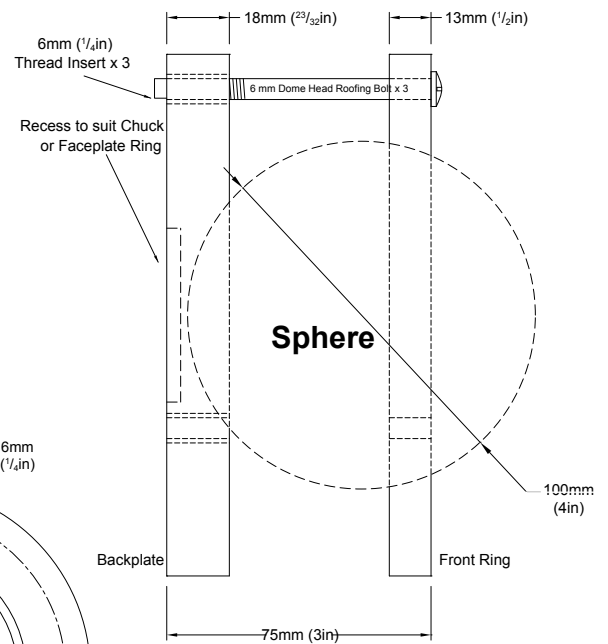
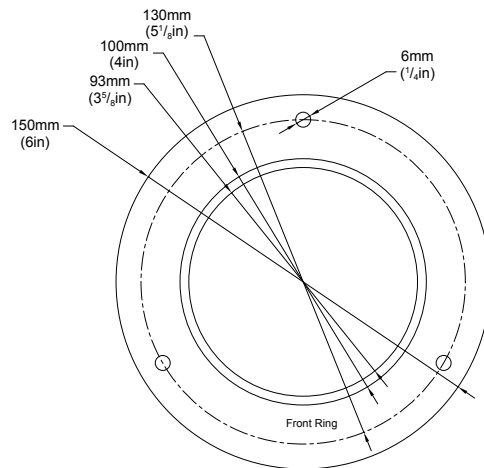
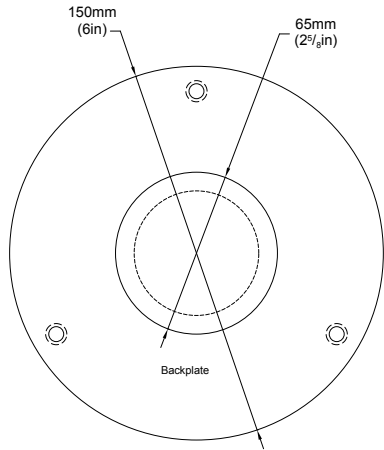
4 You can use a jig instead of hand-cutting a sphere.

5 Once you have shaped the sphere as far as you can, remove it from the lathe. Mount a cup-shaped friction drive, with at least the radius of the sphere in the end, on the headstock end of the lathe. This can be held in a chuck or on a faceplate. Now, fit a cup chuck on to a revolving centre too. If you have a threaded front end on your revolving ring centre you can screw on a homemade or readymade support. Alternatively make one to slide over your revolving centre or create one to fit in front of your revolving ring centre and between the sphere. Once everything is in place, secure the sphere between the supports with the sphere end projections clear of the cup supports. Cut off excess length of the ends and continue to refine the sphere.

You will see a shadow area as the ball spins. Use a gouge or jig to cut down to the solid ball outline. Once shaped, stop the lathe and move the ball a little and then re-clamp and cut away the shadow line. Repeat until you have a neat sphere and then sand it all over to a smooth surface.

◀ Marking out the eyes

1 Set a pair of dividers to just over the radius of the sphere, 55mm, and mark two points on the sphere. Take into account any interesting grain of features. Draw two intersecting circles approx. 60mm diameter on the centre points so they overlap by about 5-6mm. Next draw two more circles about 50mm diameter for the fluted or decorated part of the eye.



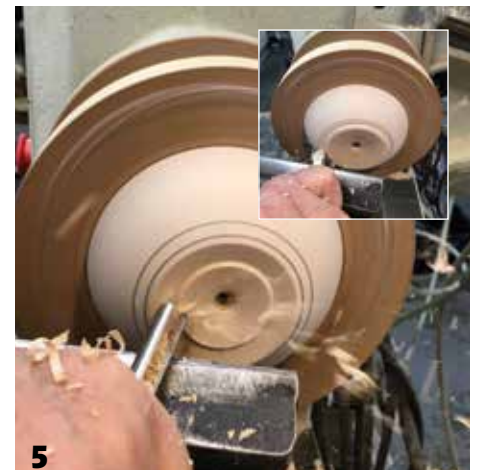
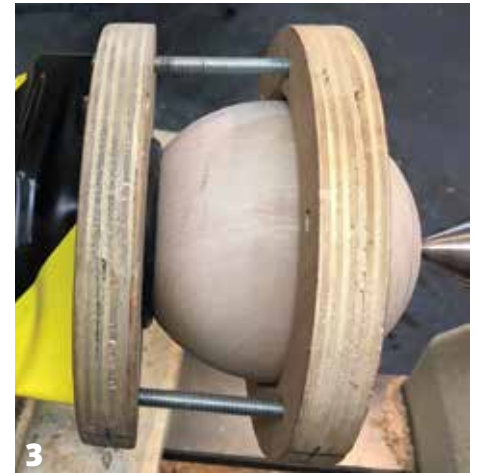
Turning and decorating eyes

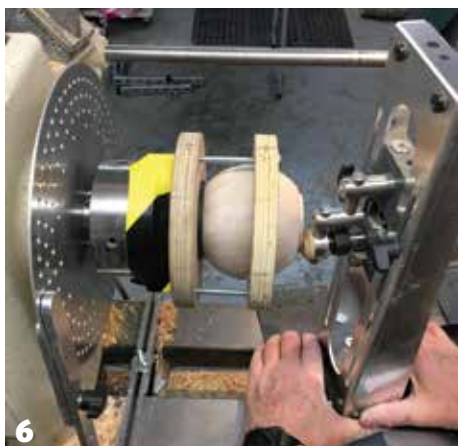
2 To turn the eyes the sphere can be held in a vacuum chuck or a simple doughnut chuck. Making your own doughnut chuck is a simple and easy method to hold spheres, but you will need to make extra front rings with different hole diameters to suit different diameter spheres. Follow the diagram to create one of your own. I will use a doughnut chuck which is mounted on a chuck via a recess in the backplate. If making your own doughnut chuck, remember to round off all edges.

3 With the sphere loose in the doughnut chuck, centre the sphere on one of the centre marks made when marking the eye locations with the dividers and lock the sphere in place. The roof bolts and nuts project past the backplate. Place a hi-vis parcel of duct tape over them to remind you to keep fingers and body parts clear of this area. Be mindful of the bolt heads at the front of the plate when turning.

4 Now mount a drill chuck in the tailstock and drill a hole, 8mm in this case, to suit the tenon on the back of your owl eyes being used.

5 Now, using a bowl or spindle gouge, turn the first concaved eye surround section, cutting only on the inner marked ring. Then use a parting tool to make a 3mm-deep cut at the edge of inner marked circle down to the outer marked circle to create a flat area which causes the eye area to stand proud of the main sphere body. Once one eye is cut, rotate the sphere to turn the second one, taking care to make them the same size. Some experimentation may be needed to get the best finish because, depending on the position of the eyes to the grain, it could be a mixture of end and side grain.

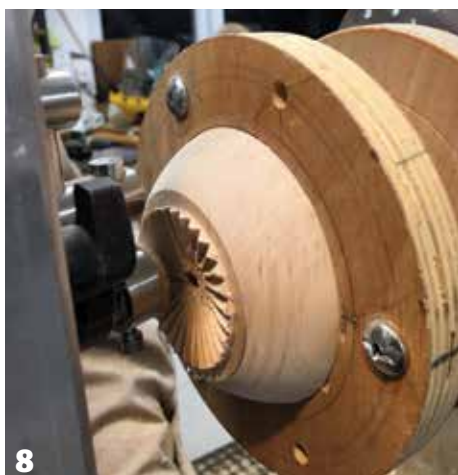




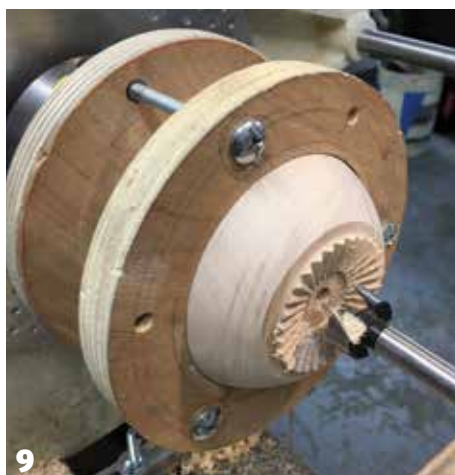
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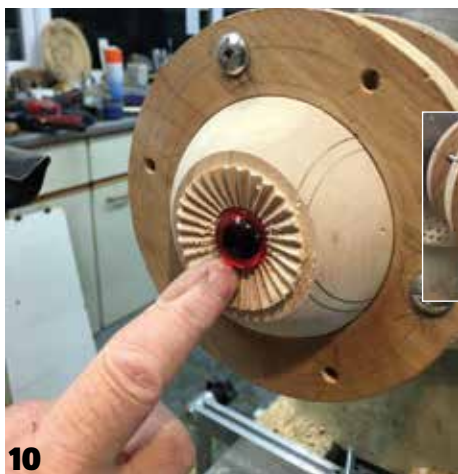
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Decorating the eyes

6 The decoration of the eyes can take any form – even being left plain, but I like a textured eye surround. I typically create V cuts using a router held in a jig and an index system to hold the work in specific positions while I cut 30 V-shaped flutes. You can have more or less flutes and while I cut mine on centre line, you can cut just above or below centre to create a different effect. Experiment to see if you like V, U or other cutter shape decoration.

7 You can carve the eye decoration by hand with a V-gouge, have shallow or deep U flutes, turn beads, or any other type of decoration you choose or even leave the eye surround plain. The router and jig create a regimented effect which some like, but others prefer a hand-cut effect which is not so orderly. If you decide to create hand-carved/cut decoration it is important the work is stable, so use an indexing unit to hold everything steady while you cut.

8 Whatever method you use, be gentle when cutting and keep the cutters sharp to minimise any tear-out. The poorer the surface you create now the more cleaning up you have to do later, and with carved or routed decoration, it is tricky to clean up without losing detail.

9 Once you have the eye surround decorated as you want it, drill a hole of a size that will allow a homemade or bought eye to be fitted into it. I like the eye to sit in just below the depth of the V cuts just created.

10 Go gentle with the drilling and check the eyes being used in the hole every so often to make sure you get it to the right depth. The size of the eyes I use is 21mm.

11 Once the first eye area is finished, slacken off the doughnut chuck, move the sphere to the right position for eye two and lock it in place. Now repeat the processes just done on the first eye area. Don't rush. Take care to ensure both eye area and surrounds are of the same size and shape. Any disparity ruins the piece.

12 The other aspect to think about is the alignment of any pattern you have created. Since I used V cuts, I need to make sure the cuts made on the second eye surround align perfectly with the ones on the first eye. A bit of adjustment of the ball in the doughnut chuck in conjunction with the indexing unit might be required, but it is a relatively simple process to ensure alignment prior to cutting. Even if you are cutting the decoration by eye, close alignment of the detail on the eye surround is desirable.

13 Gently cut the decoration until the whole eye surround is done.

The beak and cleaning up

1 The next item to make is the beak. You could just carve one on to the surface of the sphere, but I prefer to have a beak which is proud of the sphere. For this I add another piece of wood of a different colour, or in this case, I used beech (*Fagus* spp.) which I later painted black to create visual contrast to the timber used for the body. To make the beak I set up a 150mm sanding disc on my lathe with a table mounted in the banjo. The table is created from MDF and has a lip of aluminium at the sanding edge sitting just proud of the top of the MDF. This is a guide to move any jigs against. Note also the extractor hose is close to extract any dust. You can use a bench mount disc or belt sander. The chosen timber is cut to 20mm square by 100mm long.

2 I use a V-block to support the timber with an angle cut across the end of about 35-40°. If using a jig like this, run the V-jig along the aluminium guide and, using a slow lathe speed, sand the projecting section of the timber supported in the jig. Sand one side until it meets the opposite corner then turn the timber over and sand the opposite side to form the end of the beak.

3 Cut the beak shape off on bandsaw or with a hand saw (the overall length needs to be about 10mm). The first beaks I fitted to the owl were fitted to a flat carved surface of the sphere, but I found this difficult to get a good fit. Now I use a set of pen jaws in my chuck and turn the back of the beak to get a curved back area to create a perfect fit on the sphere.

4 The next stage is to sand the eye area and surround to a fine finish. You might be able to hand-sand this area or, if heavily carved or textured, you might be better off cleaning up using a combination of hand-sanding and a radial bristle brush held in a hand drill or on the lathe. You need to have a fine surface finish with no damage. The focal point of the owl is the eye area. Once sanded, glue the beak in place with fast-setting epoxy glue. Then apply your chosen finish – a spray lacquer works well – before fitting the eyes with a suitable adhesive.

Turning the body

5 The body is a simple turning job. I start with a spindle blank 65mm square 80mm long, mount it between centres and turn it to a cylinder. Turn a chuck spigot on the bottom and mount the piece in a chuck. Turn a concave shape in the top to match the shape of the sphere then turn the body shape to your chosen profile. For this project, the top is about 43mm diameter and the base 60mm. The middle of the body will be 64mm. Once shaped, sand and finish the body, part off from the lathe, clean up the base and apply your finish. Then you are free to orientate the head on the base at whichever position you choose. ●

