How to...

Make timber round

SHORTCUTS

PHOTOGRAPHS BY MARC FISH

You don't need a lathe to turn wood to round lengths. Marc Fish offers other suggestions

It is very easy to assume that everything that has a round profile has been turned on a lathe – and every furniture maker has access to one of these. Some of you might have a woodworking lathe and be proficient on it, but for extreme accuracy it can let you down, so here I am going to describe a few alternative procedures.

At this stage I would like to mention the benefit of sub contracting work to a specialist woodturner who will be able to achieve more accuracy and repeatability and be able to tackle larger-scale projects. In this article, however, I am covering some techniques that are open to all, some requiring minimal equipment and some needing more expensive kit.

Pro woodturners are great for large-scale projects. Please ensure that safety clothing and equipment are worn at all times when turning

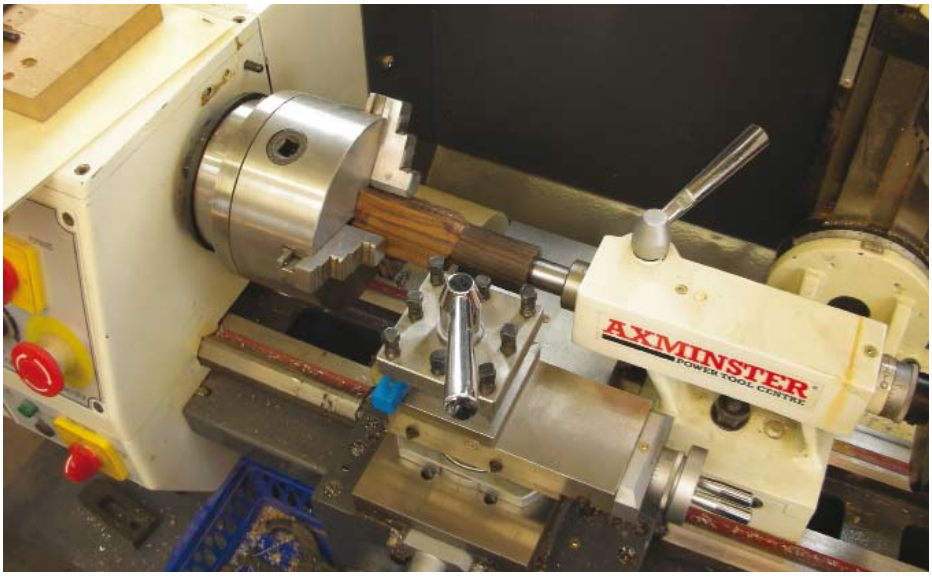
Engineering lathe

Absolute accuracy is possible with an engineering lathe

Now I know that most workshops do not have access to a metal engineering lathe, which is a pity. Some, however, do and are maybe missing a trick. One of my favourite bits of kit, its use is split 50/50 between wood and metal.

Even with eight full-time makers our woodworking lathe has not turned anything in nearly a year, and I think the money invested in one of these could have been better spent on a metal lathe. You can obtain a simple machine for less than £500. It obviously can be used to turn both metal and wood, and it is infinitely more accurate than a wood lathe. The adjustable infeed on the tool stock, together with the auto feed, mean I can obtain very smooth and accurate round lengths in all timbers and metals.

When turning wood the choice of tool, tool height and lathe speed makes a big difference to the overall finish, and a little trial and error is required. Using my engineering lathe I have always managed to achieve a superior finish with no breakout. Perhaps that's because I am not a good woodturner, but I do love the accuracy from using an engineer's lathe. I use the term dial-ability because it really is that easy.



Square-section made round on an engineering lathe

Making dowels with a jig

This technique is great for making matching or contrasting dowelling in your chosen timber. Shop-bought dowels are available but the range of timbers and sizes is limited. Making your own gives you greater flexibility.

First, however, you must make the dowel pop (jig). I made mine out of an old section of sash clamp but any steel plate will work; 2mm or thicker does the job.

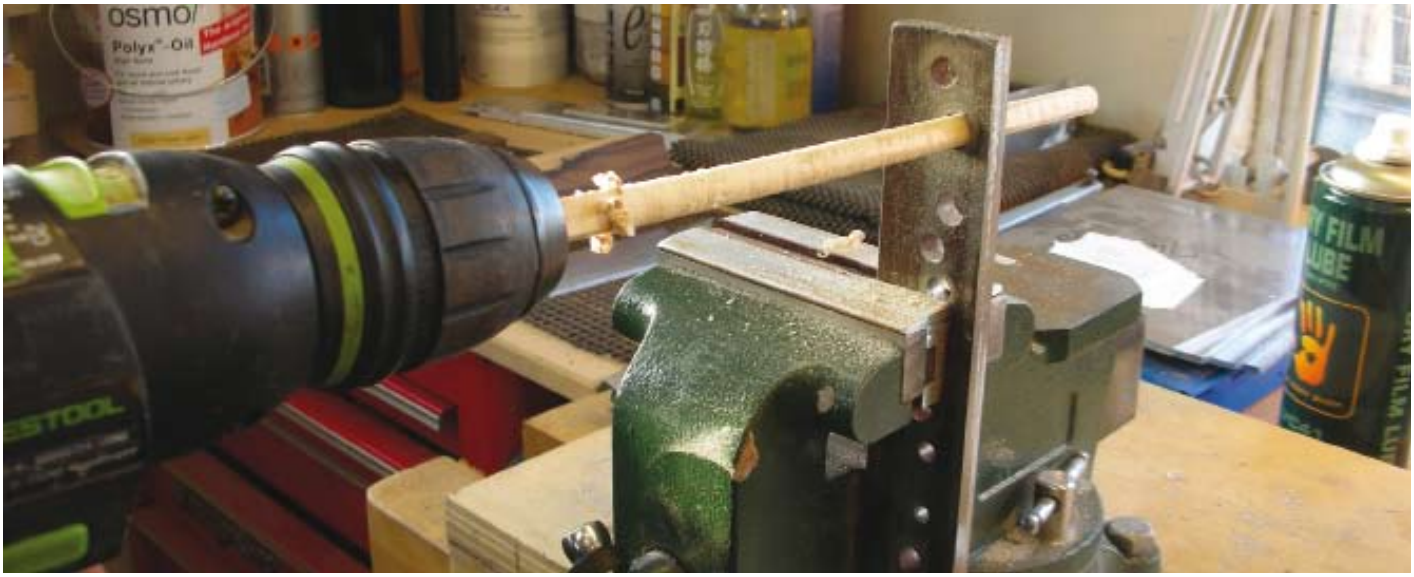
Drill the holes as required using a pillar drill. It is best to creep up to your finished size in increments of around 0.5mm at a time.

When ready to make your dowels you will need to chamfer the edges off your square stock and sharpen the end with either a chisel, a plane or a disc sander.

Place the dowel pop into the vice and the timber in a cordless drill chuck

Spokeshave

Square section marked out to create an octagon



Having chamfered the corners, spin the dowel through the graduated holes in the jig

and use a little PTFE dry lubricant; sprayed on the metal it helps to ahcieve a cleaner cut, keeps the timber cool and avoids burning on pale woods. I use a lot of this in my workshop on router bits, tables, fences, saw blades, my planer bed... the list is a long one.

Rotate the dowel through the successive holes until you have the diameter you require. Finish off by holding abrasive paper in one hand while winding the dowel in the drill.

On the end make the desired shape for shaving to

Final stage: sanding to remove the last of the points

The title here should give it away but these hand tools are so often forgotten. Spokeshaves have their origin in... making round spokes, so if you need to make a round length then don't forget this old trusty hand tool. It needs a little practice and I'm afraid to say it's all in the wrists.

Using a gauge, mark up your square timber to make a rough octagon shape, then shave down to the lines. Next, take off all the points and repeat until the shape becomes more circular.

The shape required can be drawn onto the end of the timber as a guide.

When close to the finished shape, switch to sanding to eliminate any lumps left by the spokeshave and to achieve a good finish. This is not the most accurate method described here but it is by far the easiest to do with norhing more than a spokeshave for company. >

Router table

This method is ingenious and gives an acceptable level of accuracy with a good finish. I had had some aluminium discs turned up on a CNC lathe for another project and they were ideal for this task. To achieve a straight length the discs need to be exactly the same diameter. If you use two different-sized discs then the stock will taper towards the smaller one.

You can cut these with a router or on a bandsaw using a trammel point but it might be worth paying a turner to machine some if you feel this technique will be used a lot in your workshop. They must have a hole drilled exactly in the centre of the disc to take the screw that will hold the workpiece securely.

Set the fence and cutter height to allow only a small cut each time. Always ensure that the stock is moved only in the correct direction, i.e. against the cutter. If this is not adhered to then the stock and your hands could be pulled into the cutter.

A word of warning: you will see that I am not using an ordinary cutter in the router table. It needs to be a spiral cutter not a standard straight one because these are too aggressive.

A good finish can be achieved by spending time making multiple passes at each setting. Move the fence backwards each time you have finished that stage, ensuring that only small amounts are removed each time. It is worth mentioning that you can put stops on your fence to prevent the ends of the work from getting too close to the cutter.

A zero-clearance fence will help prevent any nasty surprises. F&C

Discs attached to both ends of the stock as guides

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- **Feb 10 – Making round lengths: turning, hand planing, spokeshaving and routing**
- Mar 10 – Dovetails: top tips, marking out, batch cutting, alignment jig to ensure tight fitting
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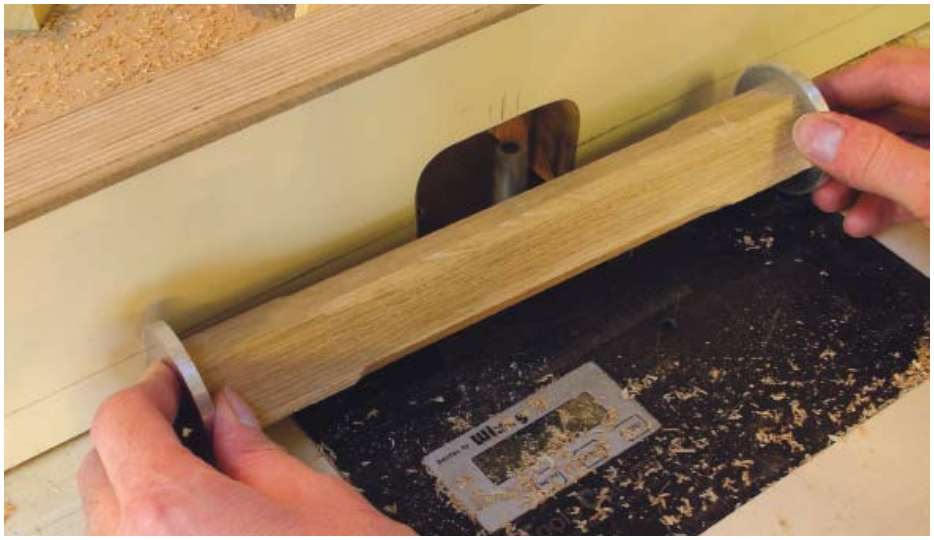

Discs maintain a constant distance from the cutter and allow for a firm grip

Hey presto! Note that this is a spiral cutter, not a standard straight 2-flute one