

Perfect dowel construction

Is it time to rethink your opinion of dowels as a means of efficient joinery? Derek Jones thinks he's found the piece of kit to do precisely that



I've always thought that dowels are great: they're quick, they achieve a strong joint and as far as shop-made alternatives to conventional methods are concerned, they're a very cheap option. Dowels are often the means by which we begin to construct our first pieces, and if you are starting from scratch, the equipment can usually be found on the shelf in any decent hardware store. If you've been tempted down this route you'll know they're also a right royal pain to get perfect every time on a batch run. When it was suggested I try a Dowelmax jig, I have to admit that I wasn't exactly overexcited. You see, I thought I'd got the whole economy joint thing covered with Dominos, biscuits, router and even a Duo Doweller. But as they say, never say never. The most common problem with

using dowels is achieving perfect alignment. Admittedly, with careful marking and a drill press, some joints can be made quite successfully, but there's always the odd hole that wanders off to make the method unreliable as a complete system on which you can depend. Some folk recommend a pilot hole; others a lip and spur bit but even these are not guaranteed to work every time. Generally speaking, we're used to getting round such problems in the workshop by creating jigs, and the Dowelmax is basically just that.



The Dowelmax with the full range of accessories

PHOTOGRAPHS BY GNC/DEREK JONES

Investment

At first it does look rather complicated and you might wonder if it's worth the investment in time to master it let alone the £239 to own one. Well, let's clear that up straight away: a more intuitive and logical device would be hard to find and the components that make up the Dowelmax are superbly engineered and finished to a standard akin to boutique tools. The edges are crisp, not sharp. The mating faces align perfectly, and as a consequence, the threads require just finger-tight pressure to hold everything in place. Oh yes, and assembly is tool-less.

In application, as with the machines previously mentioned, the Dowelmax system uses a common reference face and edge between components to work from. The instruction booklet describes the use of the jig in various ways using ticks as check marks that are also etched onto the jig itself. I've used these marks on the test pieces for continuity but you may already have your own short-hand ID. Either way, adopt this basic principle and your Dowelmax training is pretty much complete. Looks can be deceiving and the jig is very simple to use.

The kit comes with shims that allow you to work from centrelines on common dimensioned stock or offcentre if required. There's a tip in the booklet describing the calculation for determining the size of shim for any thickness of stock. On day one run up a set of shims in 0.5mm increments to cope with the range of stock you generally work with. These will allow you to place holes in various configurations to suit the joint.



Place check marks on the facing edges of the mating components and a cross on the face or edge to be drilled



Make up some shims; these will enable you to work with the most common-sized stock in your workshop



The drilling sequence can be adapted to suit the application

Versatility

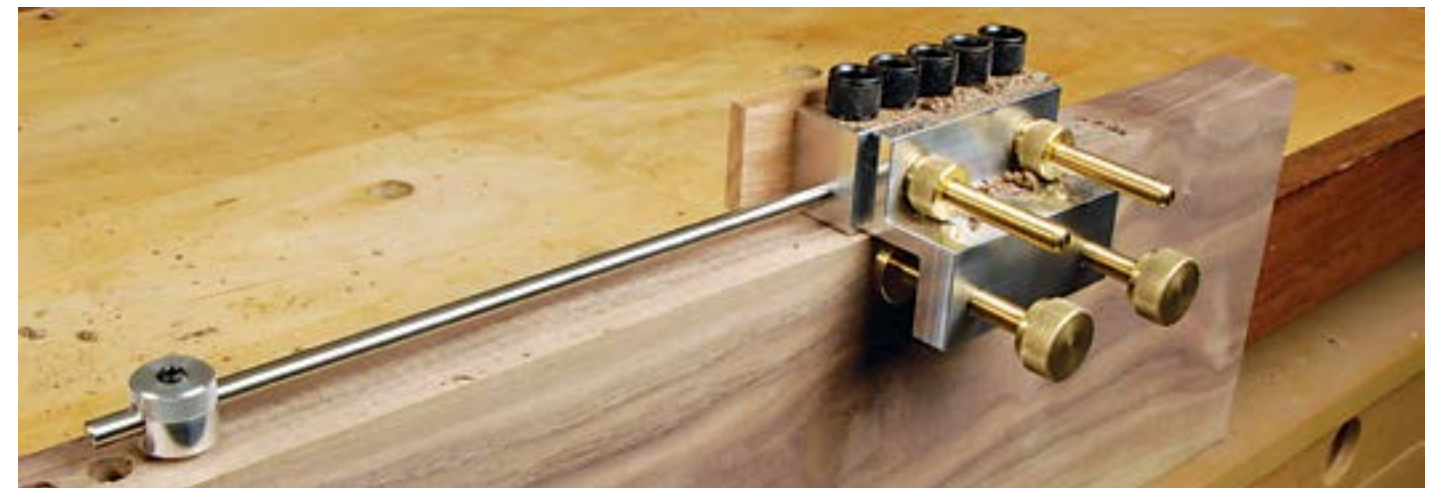
Listing all the possibilities for assembly using the Dowelmax would put me in danger of rewriting the handbook, which incidentally is comprehensive and put together just as well as the device. It includes the results of strength tests carried out with comparable jointing systems that do make interesting reading. The Dowelmax people were happy to send over their test equipment for us to carry out our own experiments but it felt rather extravagant shipping a 200kg bench half way round the globe to prove a point. It would appear the only limitation in the system is the thickness of the stock below that which would take a 6mm dowel; 14mm at a pinch, perhaps, which is comparable with other methods? I noticed somewhere online that the Dowelmax was being described as the poor man's Domino but I'd say that's underselling it somewhat. It certainly exceeded my expectations and in many ways surpasses the machines that do a similar job. There are no trailing wires or hoses to get in the way and it is relatively quiet if you're using a cordless drill. Yes, there's a bit of mess on the bench when you've finished but it hardly generates plumes of fine dust and is not dependent on a vacuum extractor to operate effectively. With the bit between your teeth it's also very quick when you've established a system.

Conclusion

If there is one thing I'd do to make it even easier to use, it would be to place a centreline on the ends of the reference block for impromptu alignment of face-fitting components. The drill bit does clog on resinous timbers and plunging slowly works better than diving in too fast. Simply put the Dowelmax is the solution to a problem by way of a jig, something we're all familiar with. Use it with your existing equipment and resist the temptation to buy into yet another product and it's as good as putting two fingers up to the machine manufacturers. When sensible tools like this hit the market, they deserve to succeed and could find a place in practically any workshop. It doesn't take too much imagination to see how it could be used to extract broken dowels or replace those on older pieces. What's more, the Dowelmax comes with an unconditional guarantee. If you're not happy with your purchase, for any reason, then simply return it within 60 days and you will receive a full refund. *F&C*



For edge jointing boards an index pin is used to create a line of evenly spaced dowel holes



Wider spacing can be repeated by using the distance gauge accessory



An offset line of 12mm from the centreline is required for face drilling



Using the index pin, a continuous row of perfectly aligned dowel holes is child's play