



Product test and review

Les Symonds reviews the Pad-o-vac Dustless Power Sanding System

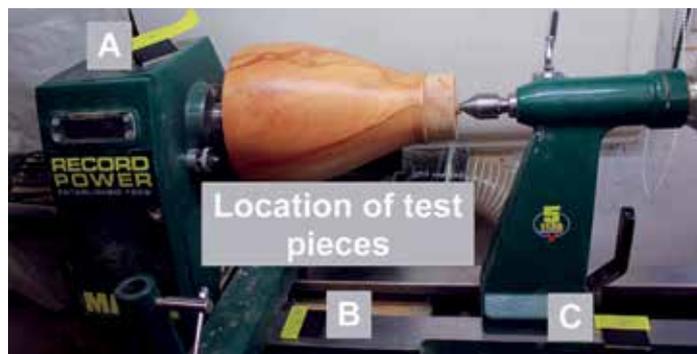
As a professional woodturner who has been trained by the British Safety Council in assessing hazards in the workplace I am acutely aware of the danger to my health of airborne dust, be it toxic or merely of a nuisance in its composition. I therefore approached the testing of this product in as close to a scientific manner as my workshop practices would accommodate.

The product

Pad-o-vac is marketed as a 'dustless power sanding system' and comprises a single main component, that being a hand-held unit resembling a small power drill. The body of the unit has a shaft running through it, a hexagonal arbor projecting from its rear end and a hook-and-loop-faced sanding pad at its front end. Its sideways projecting handle is hollow and has a connection port to accept a 30mm suction hose. For power sanding at the lathe, its hexagonal arbor is set into the chuck of any power drill, while a standard 30mm suction hose connects it to a workshop vacuum cleaner or dust extraction system. When the suction is switched on, a hollow, conical collar which surrounds the back of its sanding pad directs the suction around the entire edge of the pad and backwards into the unit's body, where it is then drawn down into the suction hose and away to the suction source. Thus, a hand-held power drill (preferably battery powered) and a suction source are needed. As for the connection to the suction source; the unit's standard 30mm diameter port, as found on a wide range of powered hand tools, such as routers, sanders, planers and saws, also fits many standard-sized vacuum cleaner hoses. A dust extraction system with a 100mm hose will benefit from a user-supplied reducer and a short length of 30mm hose fitted.

Preparation for the test

To ensure that there wasn't any airborne dust already present in the workshop, the workpiece (air-dried beech at 15% moisture content) was pre-turned to its external shape and then the workshop was thoroughly cleaned the night before the test and left unused until the test began the next morning. Throughout



PHOTOGRAPH BY LES SYMONDS

The test set-up

the test, all doors and windows were kept closed to avoid any disturbance of air-flow and all other forms of dust extraction and air filtration were isolated and remained unused unless they featured in the test. Three tests were carried out under as near-identical conditions as could be achieved.

Test (a) involved power sanding the outside of the workpiece with a battery powered hand drill and a 50mm, 120-grit sanding disk, as supplied by the maker. Sanding continued for one minute. Throughout the test, four pieces of plywood had been positioned at strategic points to collect any outfall of dust. These 'register' pieces were 50mm square, painted matt black with a strip of 25mm masking tape fixed along one side of each. **Piece 1** was positioned on the headrest, tilted by a few degrees towards the workpiece. **Piece 2** was positioned on the lathe bed, directly beneath the workpiece. **Piece 3** was positioned on the lathe bed, just beyond the tailstock. **Piece 4** had double-sided tape on its rear and was fastened to my shoulder.

Following test (a), the register pieces had the strips of masking tape removed and were photographed, then the dust cleaned

away. The lathe was cleaned down and the workshop left unused for an hour to allow any dust to settle before a second wipe-down of the lathe and the repositioning of the register pieces under identical conditions as reported for test (a).

Test (b) involved a repeat of test (a), but with my Record Power DX1000 dust extractor working, its 100mm extraction hose positioned directly behind the workpiece, with a hopper-type terminal fitted to it. A fresh sanding pad was used, of the same type and for the same duration as in test (a). At the end of the test the register pieces were again collated and photographed.

Test (c) involved a repeat of test (a), but with the Pad-o-vac employed as described above. A fresh sanding pad was used, of the same type and for the same duration as in test (a). At the end of the test the register pieces showed such a minor contamination with dust that the test was allowed to run for a further two minutes, then the register pieces were again collated and photographed.

The result

The photographs of the four register pieces speak for themselves. The amount of airborne dust was dramatically reduced to the point that, as mentioned above, the test involving the Pad-o-vac was extended to give a visible result. Indeed, you might notice that while the dust extractor coped admirably with fine, airborne dust, occasional clusters of dust fell to the lathe bed and remained there, as did finer airborne dust which travelled as far as the register pieces on my shoulder and behind the tailstock. Thus, the unit achieves its primary function admirably and is therefore advantageous to any woodturner.

At first, I found the experience of holding what amounts to two drills in-line a little strange and was concerned that it might be cumbersome. However, this did not prove to be the case. The near-doubling of length of the hand-held system effectively gave more control, just as the longer handle of a large bowl gouge gives greater control than would be experienced with a short-handled tool.

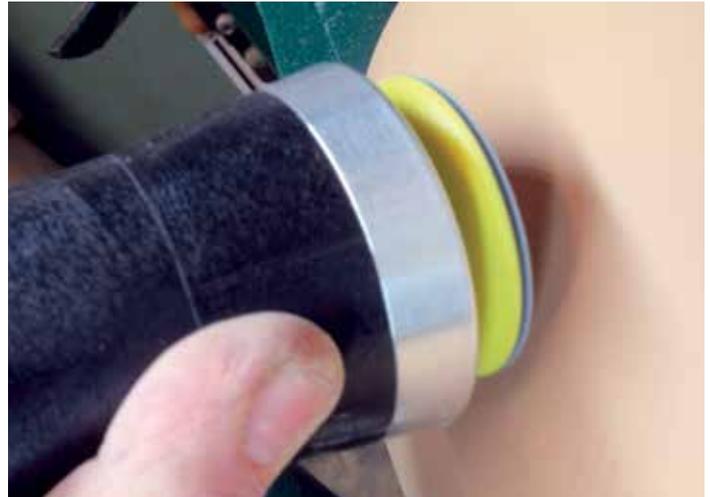
I was expecting to have to tape the end of the suction-hose on to the port of the unit, but this proved unnecessary as the vacuum caused when my vacuum cleaner was switched on held the hose in place securely. When switched off, the unit and the hose separated themselves, which some people might consider to be a slight nuisance, especially if further sanding needs to take place, but this can easily be overcome.

Internal bowl sanding

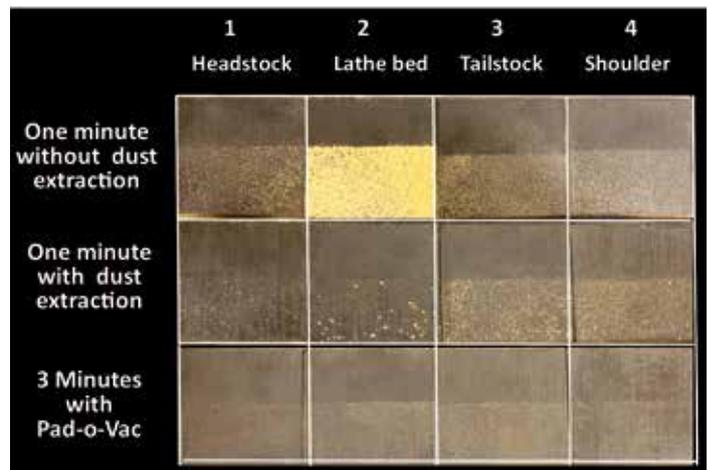
Following the success of the three tests on the exterior of the bowl, I then hollowed a yew bowl and tried the Pad-o-vac unit on its inside. This bowl was approximately 18cm diameter x 8cm deep, with a live edge. As before, the handle was swung through the same arc, but the increased length of the combined unit and hand drill took me a few moments to familiarise with, otherwise, there were no great differences in use. Arguably, the smaller diameter of the body of the unit, compared to the body of my hand drill, afforded a little extra close working when sanding up to the rim, which I was able to achieve comfortably, to the point where the live edge commenced.

Conclusion

That the Pad-o-vac achieved its claim of being a 'dustless' system cannot reasonably be argued against, as the amount of dust on the four register pieces was effectively nil. I concede that the system feels a little strange when first used, but no more so than the use of a traditional unpowered sanding system when I first used one, nor of a powered system when I first swapped to that. Given that the unit swings through little more than 90° when used either inside or outside a bowl, my 30mm extraction hose



No visible dust



The test results



Internal bowl sanding

did not prove cumbersome at all, but I am sure that those turners using a 100mm hose will need to fit a reducer and short length of hose, as previously mentioned.

More information available from <https://www.padovac.co.uk/> 07410 963 046. ●