

Axminster lathe and chuck on test

Walter Hall puts the Axminster Trade Series AT1016VS Lathe and the Axminster Woodturning Starter Kit SK100 Chuck Package through their paces

The introduction of the AT1016VS lathe fills a gap in the Axminster range between its Hobby series lathes and the previous entry level to its professional series, the AT1416VS, with which the new model shares the same cast iron bed, bringing a professional quality lathe within the budget of those seeking to spend under £600.

The AT1016VS differs from its larger sibling in having an electronically controlled 560-watt DC motor in place of the inverter technology and three-phase motor found on the AT1416VS. The swing over the bed is also reduced from 350mm to 250mm while the distance between centres remains the same at 400mm.

What does not differ, however, is the solid cast iron construction and build quality that we have come to expect from Axminster professional series machines. The headstock is compact but robust and fitted with 24 point indexing, using a removable pin that has a rare earth magnet fitted so that it may be stored conveniently on the headstock when not in use without fear of it disappearing into the shavings. The compact design gives ample clearance around the headstock to allow work to be undertaken on the back of a workpiece, especially when partnered with the Axminster SK100 Chuck, which may be secured to the M33 x 3.5mm spindle with grub screws to facilitate reverse sanding etc.

The details

The drive from the DC motor is by three stepped pulleys giving three speed ranges of 170-960, 300-1,660 and 660-3,600 rpm, which are changed by accessing the belt through the large panel at the rear of the headstock and by swinging the electronic switch box to one side. The switch box is equipped with an on-off switch at the rear, a pull-on/push-off safety switch on the front along with the potentiometer to vary the speed, while on the top of the box are the LED readout of spindle speed in rpm and the forward/reverse switch. My only minor quibble is that the box is fitted at the end of the bed on the opposite side of the tailstock to the operator when undertaking faceplate work, and is less convenient than the moveable magnetic switch mounting of the AT1416VS should rapid access be required to switch off the machine.

Just above the switch box and at the tailstock end of the bed are fitted lifting handles which make the lathe, at 38kg, reasonably portable or facilitate movement around the workshop when mounted on the optional floor stand, which has heavy-duty wheels at one end and rubber feet at the other. This arrangement is most convenient if space is limited,

but if unbalanced or off-centre work is proposed then bolting the floor stand down would be a better option.

The tailstock and toolrest holder are each held by robust cam lock levers and slide along the bed easily with minimal lateral movement. Useful etched marks on the tailstock quill facilitate accurate drilling. The quill and offset tool post are held in place with heavy-duty Bristol locking levers.

Using the lathe

In operation I found this to be an excellent little machine – possibly the quietest and smoothest lathe I have ever used. The DC motor performed with negligible speed reduction, even when making heavy cuts on faceplate work to the machine's maximum capacity. Some vibration was evident with initially out-of-balance blanks but would be less so if the machine had been bolted down. Accuracy between centres was good enough for precision work such as pen making or drilling. The lathe comes as standard with a good quality four-prong drive and revolving tailstock centre of Axminster's own manufacture, along with a 3in (75mm) faceplate.

A knockout bar for centres and retaining spanner for the spindle are also provided.



The pulley arrangement in the headstock



The hinged control unit



Banjo and toolrest assembly



The tailstock



SK100 Chuck

The test machine came supplied with Axminster's Woodturning Starter Kit SK100 Chuck Package, which includes dovetail 'C' jaws, matching faceplate ring and screw chuck, is direct threaded for the M33 x 3.5mm spindle and features safety accessory mounting jaws with rounded ends to reduce the risk of injury. I found this chuck to be an excellent companion for the AT1016VS lathe and no doubt this chuck will suit many other lathes too. It is well engineered, accurate and easy to use and if one buys this chuck there is a wide variety of other chuck jaws as optional extras.

The rounded ends of the carrier jaws are an excellent addition to the chuck and will mitigate some of the risk of hurt if one inadvertently comes into contact with the extended carriers. The only downside with the chuck – and this is subjective – is that one can extend the opening of the jaws so much that the carriers come out completely from the chuck body. There are pros and cons to this. An advantage is that the jaws are easily changeable without the need to remove a stop screw or similar to do so. But you have to be careful about how far you open the jaws to ensure that all carriers are fully engaged in the scroll mechanism before starting the lathe. This means one has to be accurate in matching the recommended sized of spigot/recess to match to jaws used.

Conclusion

In conclusion, I found this an excellent little lathe and a fine choice for anyone seeking a professional quality first lathe or upgrade from Axminster's own hobby range of lathes or similar machines. Its portability and the ease with which it can be moved around the workshop would also make it a sound option for anyone seeking a lathe for demonstrating at craft fairs, or for whom workshop space is at a premium. The chuck performed as well as the lathe and is an excellent partner for the lathe. The lathe is priced at £599 and the chuck package is £179.95. With a combined price of under £800 it would allow a beginner to add a set of quality chisels and gouges and still have change from £1,000. ●

STARTER KIT SK100 CHUCK PACKAGE

Comprises a stainless steel chuck with carrier jaws, dovetail jaws (C) with a recommended range of 50-70mm internal grip and 65-85mm external grip, matching faceplate ring and screw chuck, packed into a strong plastic storage box.

Price: £179.95

Prices may be subject to change without notice.

For both the lathe and starter kit Contact:

Axminster Tools & Machinery

Web: www.axminster.co.uk



The chuck fitted to the lathe

AT1016VS LATHE TECHNICAL SPECIFICATIONS

Distance between centres: 400mm, depending on the type of centres fitted

Max diameter over bed: 250mm

Net weight: 38kg

Overall L x W x H: 900 x 390 x 365mm

Power: 560W, 230V, 1hp

Speed: 170-960/300-1,660/660-3,600rpm

Spindle taper: 2MT

Spindle thread: M33 x 3.5mm

Tool rest stem diameter: 16mm

Tailstock taper: 2MT

Price: £599 (price may be subject to change without notice)



Axminster's Woodturning Starter Kit SK100 Chuck Package