July 2023

Crosscut

◄ **Variable speed 12 x 18" wood lathe (MC1218V) from Adendorf**

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Next Turners' meeting – **Monday, 3rd July 2023** from 18h00 at **Made in Workshop** – To be advised. Also Layout and Measuring for woodturners.

Next Main club meeting – **Wednesday,12th July 2023** from 18h00 at **Made in Workshop** – Lay out and measuring – various topics.

New WWA Account number. FNB 63026931287 – please make sure that your payment can be identified by adding your full name, perhaps cell number and reason for payment.

News

Turners' meeting. Monday – 5th June 2023 from 18h00 at **Made in Workshop**. Pen turning demo by Anesh. As a novice woodturner, Anesh gave a step-by-step guide to starting pen making. He showed a list of steps with the pen components below. He showed each step with the materials required, tools and jigs required. He explained which were essential, and which were nice-to-have. Local sources for pen blanks and tooling are Hardware Centre and MrWoodturner, with the latter having a good on-line web site and selection of pen kits. Pen turners have a variety of special finishes that they each prefer. Anesh uses a concoction from Peter Middleton, which is a mixture of Boiled Linseed Oil, Alcohol and shellac – the formula is given later in this newsletter.

Main club meeting. Wednesday – 14th June 2023 from 18h00 at **Made in Workshop** – The 34th Annual General Meeting of the Witwatersrand Woodworking Association was held at Made in Workshop, in Strydom park, Randburg. Attendance was good, with 32 members present and 8 apologies, that included 3 proxies. As in introduction, Henry Levine, the owner of Made in Workshop gave a status update of the facilities that WWA members have access to. Then our chairman, Graham Swallow – shown on the right - led the meeting and reported on the healthy state of the association. Graham thanked all the committee members and other members who helped during the previous year. The existing committee all made themselves available to serve for another year, with the exception of Jeanette, who

stood down during the last year, but contributes very much behind the scenes. The constitution provides that the roles of the members in the committee be allocated at the first committee meeting, but these are not expected to change much. Some issues raised by the members will be addressed by the committee through the year, and members are encouraged to continue communicating any concerns that they may have. The full minutes of the AGM and financial statements have been distributed separately to members for information.

Acoustic guitar construction – after the AGM, Graham explained some of the techniques he uses to make acoustic guitars of the "Dreadnought" pattern. The above picture shows a bending form that Graham uses to shape the sides of the body.

Dave Drummond showed the first Windsor-pattern chair that he made, as well as some of the tools he used. The webbing on the chair was used to hold the arms in place, because he hadn't glued them in yet.

Reminder - New WWA Account number. Due to ongoing difficulties in changing signatories and poor service from Nedbank, the committee resolved to change banks. Anesh, our new treasurer has opened an account with **FNB** and requests that all payments be made into this new account: **63026931287** – please add this to your beneficiaries list. Please make sure that your payment can be identified by adding your **name**, perhaps cell number and **reason for payment**. Annotations such as "annual subs" or "WWA shirt" without your name are not helpful – Anesh will not be able to trace your payment.

Access times for Made in Workshop for WWA members :

MiW times for members are as follows

Monday, Thursday, Friday and Saturday 9AM to 12AM. However please take note of the following:

WWA members CANNOT just pitch up and use machines unless they have booked them with MiW. This refers to the bookable machines such as the panel saw, thicknesser/planer, drum sander, spindle moulder as well as CNC machines of any kind.

Machines such as the bandsaw and the Triton router table need no booking

Henry has also asked me to convey that all the major machines may only be used if the WWA member is familiar and fully understands the importance of the correct and safe use of these machines. Speak to Graham regarding training and qualification to use machines.

Bookings can be made during office hours of 8h00 to 17h00, weekdays by contacting one of these numbers:

Henry – 083-269 9505
Josh – 083-768 7853
Trenton – 081-365 6039

Peter Middleton's polish. If you have spent time around pen turners, you will know that each has their favourite finish. Superglue is quite common. Another is a friction polish, so-called because it is quick drying due to the heat of the application on the lathe. Some people may remember *Speed 'n Eze* from Myford and then Record. Mr Woodturner (http://www.mrwoodturner.co.za/) sells one called *Easy Polish*. Hardware Centre (https://hardwarecentre.co.za/) has two brands of button polishes, from Liberon and Rustins that may also be suitable, although they are pure shellac. Gobelins in KZN (http://www.thewoodcarecompany.co.za/products/) also offers a *Danish oil* that some prefer.

For that those that prefer to make their own, here is Peter Middleton's recipe:

One part shellac premixed in alcohol, one part alcohol and one part boiled linseed oil. The alcohol can be denatured, such as methylated spirits or isopropyl alcohol. The strength of the shellac premixed in alcohol can be between 12g and 36g of flakes per 100ml of alcohol.

Some friction polishes may also have a wax added such as carnuba or beeswax.
The polish is applied using a rag, either with the work piece stationary or rotating slowly. The workpiece is spun on the lathe and the cloth is used to buff the polish to a shine, warming it up to flash off the alcohol.

Is friction polish food safe? Shellac is food safe and is used in confectionery. Once the alcohol has evaporated it is not part of the finish. Linseed oil is edible, but boiled linseed oil has a drier added, such as a small amount of a metallic salt (cobalt or iron salts are two that I am aware of) – this may not be food safe, depending on the drier used. This should be declared by the manufacturer. If beeswax is used, it is foodsafe. Carnuba wax is food safe if a food grade wax is used – it is also used in confections.

Raffle prizes during the year. The committee is always on the look-out for raffle prizes through the year. Donations and purchase of prizes such as surplus tools from members are one option. Please approach a committee member if you can assist. We have purchased three copies of Butch Smuts upcoming book on his woodturning career to give away as raffle prizes. Butch expects the book to be printed in July this year, printers' schedule permitting.

Schedule for Regular Events at Made in Workshop

1. Second Saturday of month at 9h00 - Herman – all things turning related – 083 631 0501 hermanpotgieteresq AT gmail.com

This list is subject to change, so please consult your *Crosscut* each month.

Show & Tell meetings are held at Hardware Centre every Friday Morning at 09:30. All members welcome. Contact Eugene on 0824953394 or eugene@antlerfin.co.za

I would like to try woodturning at home – how much do I need to spend?

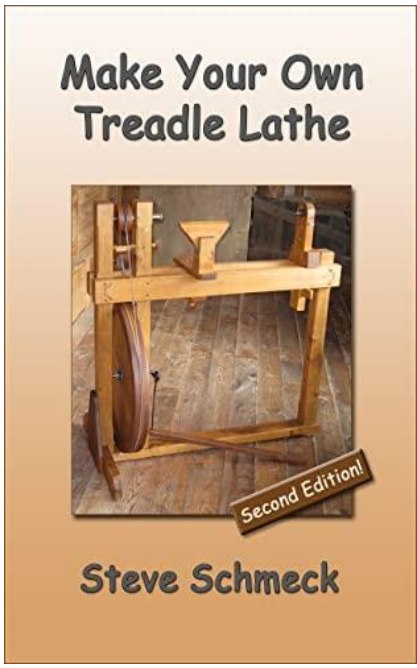
Trevor Pope – June 2023

This is a common question that is asked by visitors each year at Hobby-X.

The first review of this was in 2015, revised in 2019 and now again in 2023! As you may expect, prices have risen, as the value of the Rand continues to slide, so affordability is a concern. Stock holdings of local suppliers are also a concern – many of the models previously listed are not available locally or stock is being awaited, so you will have to keep in contact with the suppliers I have listed below.

You can save a lot by buying second-hand, but this is largely a matter of patience and luck. For most people, buying new is the only option. The prices quoted below are list prices for new lathes. Shop around – you may find better deals.

Before you buy any powered machinery, invest in a good, comfortable set of impact rated safety glasses. (R100-) Don't be a cheapskate about your eyes! They can't be replaced. If you need reading glasses, integrated reading lenses (+1.0 to +3.0) can be found in some, such as those available from Elvex.



Cheapest Powered Wood Lathe:

(Why powered? Well, you can make a treadle lathe for very little, and learn a lot from using one. I started with one. I quickly learned slicing cuts and not to scrape, and that green wood is much easier to start with. There are many designs out there, even the odd book too – this one is listed on Amazon. However, let us confine this discussion to electrically powered lathes.)

The cheapest powered lathe with tubular bars can be had new for about R3000-. They are readily available used. However, I cannot recommend you buy one – they are common second-hand because they have too many problems. This was reinforced to me at Hobby-X 2018 when a couple described their difficulties trying to do useful work on such a lathe. The lack of rigidity of the bed meant that the centers would not locate adequately into the ends of the workpiece due to the bed bowing. If the bed bows due to the force needed to hold the workpiece between centers, this means that the axes of the centers are not co-linear, with the risk of the workpiece flying off the lathe!

These lathes don't have tapers in the head and tail stock, so common accessories won't fit. The tool rest is not rigid, and combined with the flexing bed will give you difficulties that you don't need as a beginner. Caveat emptor!

What follows is a review of entry level woodturning lathes. I've left off the more expensive lathes because there are not many listed and available at the moment and with the collapsing Rand, prices will be rising rapidly.

Mini Lathes:

As a first lathe, I don't think you will go wrong with a mini-lathe with a cast-iron bed. The so-called mini lathes were popularized by the Jet 1014, which is described in more detail further below. A mini-lathe

typically has a cast iron bed, with capacity for work pieces of about 10" diameter by 14" long, hence the Jet model designation of 1014. Newer models have greater capacities, but are similar in size.

The cheapest suitable unit is the one sold by Adendorff. (www.adendorff.co.za) ►
The MC1218 currently lists at R4895-. It has a capacity of 305 x 450mm. A 550mm bed extension is available to bring the total length between centers to 990mm (39").

A woodturning lathe is a simple machine, with only a few moving parts. Spare parts such as bearings are readily available, so the risks are low. Small lathes are also easy to sell second-hand, in case you decide that wood-turning is not for you.

Tools

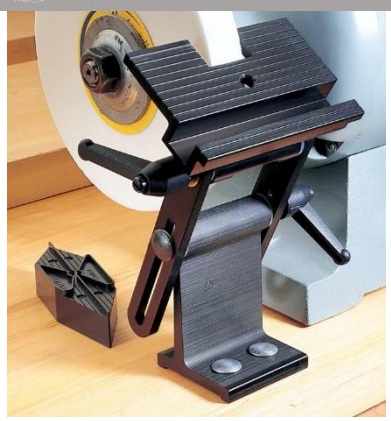
Next, a set of 8 carbon steel turning tools lists at about R600-.
You must be able to sharpen your tools. An abrasive wood like blue gum can take the edge off a gouge in a minute. A small 150mm bench grinder (R800-) is probably the most practical for sharpening turning tools.

Small bench grinders are readily available used but be sure to ask to see it running first. Inspect the wheels for signs of abuse, and leave it running for a couple of minutes, standing well clear in case of exploding wheels! If there is excessive vibration, price in the cost and effort of changing the grinding wheels. If you can, buy a grinder with 16mm, 20mm or even 25mm wide wheels – the wider the better.
You will need to learn how to sharpen your tools. With practice, this is quick and with the cheaper carbon steel tools, I would be less concerned about practicing on them.

So, to start, budget for
R5000- for the lathe, R600- for some tools, R800- for a grinder and R100- for a good pair of safety glasses = total R6500-

With the above lathe, you will be able to work between centers and on the faceplate.

Some sort of adjustable tilting platform on the grinder will help to grind to consistent angles. This can be home-made or you can look at the platform offered by Creative Turning (R1310-) or the Veritas tool rest for bench grinders from BPM Toolcraft (R1300-)



Chucks

Until about 40 years ago specialized chucks were not much used in woodturning. A chuck is not essential to start with - you can make many things without a chuck, with time and ingenuity. However, a chuck does widen the scope of what you can do and is much more convenient.

So, the next thing you will probably want to buy is a chuck. A very basic chuck with a single set of jaws is available from Adendorff, for R1700- but it is rather restricting. A more expensive starter chuck with several sets of interchangeable jaws is what I recommend. I have one and it is good value for money. This one from Adendorf can be had for about R3900-. Also check Strand Hardware, Mr Woodturner, BPM toolcraft, Hardware Centre and Creative Woodturning for alternatives.

It is important to buy a chuck intended for woodturning, as the jaws are designed for holding wood. A metal-working chuck doesn't have the right jaws. Make sure the chuck will fit the lathe's spindle thread, so it can be screwed on securely. Most mini-lathes have a 1" x 8tpi spindle thread, and all chucks are offered in this thread. Adapters for other threads may be available.

High Speed Steel (HSS) tools keep their edges up to 5 times longer than carbon steel tools, which means less sharpening. Also, there is less risk of "burning" the edges when sharpening on the high-speed grinder. If you over-heat the edge of the tool, which is very easy to do if you are heavy handed, you will see that the edge goes blue, meaning that the temperature has exceeded 300º C, A carbon steel edge will have lost some hardness. It will then need much more frequent sharpening. HSS tools do not lose hardness up to red-heat, so even if the edge blues, you don't lose the hardness.
If you have bought carbon steel tools and decide to upgrade later to the HSS tools, you will find lots of uses for the older tools, such as regrinding to other shapes, which you wouldn't like to do with your more expensive HSS tools. So don't give the old carbon steel tools away.

So, if you have a little more to spend, then this is what I would recommend:
R5000- for the lathe; R2500- for a set of 8 HSS tools from a Tork Craft dealer; R800- for a grinder; R100- for a good pair of safety glasses; and a basic chuck with interchangeable jaws R3900- = Total R12300-.

Then you will have a setup that can serve you for many years of turning.

There quite a few different sets of turning tools available from Tork Craft, Strand, Mr Woodturner, Creative Turning, BPM Toolcraft,etc, so shop around to see exactly which you prefer. There are also a couple of different entry level chucks available, so the above pricing is just a guide.

The picture shows a 63mm chuck with 4 different sets of jaws, and a woodscrew, available from Creative Woodturning and BPM Toolcraft. which may be a good value-for-money option. It lists at R2900-. It is small, but I find that the one I have is very useful.

Bear in mind that there are lots more tools that you may wish to buy as you become more proficient. Higher quality HSS tools, chucks, lathes, specialized tools, etc will put pressure on your wallet, but that is up to you.

At Smit from the Pretoria club once said to me: "Eintlik is die draaibank die kleinste uitgawe!" – In the end, the lathe is not the biggest expense! You can see that in the cost breakdown above.

Some of the newer Adendoff lathes use an aluminum bodied induction motor that seems to run quite hot, but this may due to the better heat conduction properties of the aluminum body compared with more common steel motor bodies. The internal winding temperatures should still remain within specification.

A variable speed version of the Adendorf MC1218, the MV1218V lists at R8000-. It uses a DC motor and variable speed controller. You can see from the picture that it includes an LCD display on the headstock to display the spindle speed as well.

Pricing and availability of all the items mentioned is obviously subject to change.

If you are not sure what to buy, don't be afraid to seek advice from your fellow club members.

If you take a course or use the club lathes, you can experience some of the tools and kit first-hand, and see for yourself. This can help you to make a decision on what to buy.

I should also mention that you don't need to spend money on expensive wood blanks to start with. A lot of wood is available in the round, freshly cut, for free. When people know you are turning they will often give you wood that was destined for the dump. Try to get the wood when it has been freshly cut, before it is ruined with excessive cracking. Understanding how wood behaves when it dries is a topic for another day.

Other small lathes available on the local market.

There are a number of other mini lathes available locally, albeit at higher prices. These are described below.

- **Strand Hardware has the agency for Technatool, the manufacturers of Nova lathes**. (www.strandhardware.co.za) They also sell the Toolmate range of lathes.
- **Mr Woodturner is imports the Charnwood range of machinery**. Charnwood is an old British brand name, with a long history in the UK. As is usual with Mr Woodturner, there is a range of spares and accessories to support the machinery that they sell. (www.mrwoodturner.co.za)
- Well-known Pretoria wood turner Carel van der Merwe is importing a range of Chinese made lathes that also seem to offer good value for money. (www.creativeturning.co.za)
- BPM Toolcraft in Cape Town has a good selection of hand tools, lathe chisels and some lathes. (www.toolcraft.co.za)
- Hardware centre doesn't seem to have much stock on hand for you to look at, at the moment, but historically they have been a good source of lathes and tools.

Almost all the lathes mentioned below accept #2 MT tooling and all have a 1" x 8tpi headstock spindle thread.

Mini lathes

Jet – The mini-lathe category was defined by the Jet Mini – JWL-1014, which has been available since 2003 in South Africa. It has been updated slightly over the years to include an indexing pin/spindle lock, but is essentially unchanged. It can turn a workpiece up to 10 inches in diameter by 14 inches long (250mm diam x 350mm long), with 5 fixed speeds from the ½ horsepower (370W) induction motor. The 10 inches diameter is over the bed, and doesn't include the tool rest banjo, so you won't be able turn a full 10" x 14" cylinder without fouling the tool rest banjo.

The JWL-1014 is an excellent starter lathe. If you out-grow this lathe or lose interest, it has good resale value. A bed extension was available to increase the maximum length between centres. It has been offered in a variable speed version (JWL1014VS), which uses a DC motor. The VS has been criticised for lack of torque at low speeds, even on the lowest belt speed range. This may concern you only when roughing out large pieces, when a light touch will be needed. The JWL-1014 has been superseded by the JWL1015 shown on the right, which is slightly larger.
The WWA's JWL-1014 has stood up fairly well to many years of club use. The power switch is rather fragile and has been replaced by an NVR switch. The tool rest failed and had to be replaced. Also, the locking lever on the motor belt tension mechanism has been broken and needs to be replaced. The WWA's Jet 1014 is at our MiW workshop so you can try it before making a decision.

Also, slightly larger than the JWL-1014 is the JWL-1220 which accommodates 12" x 20" (300mm x 500mm) workpieces.
Most of these lathes have a 1" x 8 tpi spindle, but some were built with the M33 x 3.5 thread for the European market, so confirm which will be supplied before ordering. It also has a spindle lock with indexing.

Mr Woodturner imports the **Charnwood** range of lathes. Two models are offered, the W815 and the W824
The **Charnwood W815** is capable of mounting work-pieces up to 330mm long by 200mm diameter (13" x 8"). It has a variable speed DC motor with a single belt ratio, giving a speed range of 750 to 3200 rpm. The chuck fixing is the common 1" x 8 tpi thread, but the headstock and tailstock tapers are #1 MT, which are perfectly adequate for a lathe of this size. It does mean that some accessories will be more difficult to source than the more widely available #2 MT. The Record range of lathes used #1 MT tapers, so this may help you to find additional drive and tail centres if you need them. This lathe was well priced, at R4150- but is most likely to appeal to pen and miniature turners. With only a single belt ratio, it can be expected that when turning large work pieces at the lowest speed setting, there will be a lack of low-down torque – something to check before you buy one.

The **Charnwood W824** is capable of 300mm diameter by 450mm long work pieces (12” x 18”). It is altogether more substantial than the W815 and is very similar to the other Mini lathes in the market, such as the Adendorf MC1218V. (Which is noteworthy, because Mr Woodturner does keep a few spare parts…)

It has the usual 1” x 8 tpi head stock spindle thread and #2 MT sockets in the headstock and tail stock, giving a wide choice of accessories. The motor is a 550W (3/4 horsepower for those old enough to remember horsepower) DC motor with a variable speed controller. The overall speed range of 500 to 4000 rpm is achieved in two ranges using two belt drive ranges (500 to 2000 rpm and 1000 to 4000prm). Spindle speeds are shown on an LCD readout. The minimum speed is still quite high at 500 rpm at the low-speed belt position; however, torque is likely to be considerably better that its baby brother at the lowest speed setting, but I would still check this before buying. The belt cover lifts off so belt changing can be done by sight and not by feel as in some other lathes (Jet 1014). It also has a 24-position indexer. The W824 is not presently listed, but if more are imported, it may be worth a look.

Creative Turning

New in the local market, imported by respected Pretoria woodtumer, Carel van der Merwe is a range of 2 small lathes.

The smallest is the **CT150VS1** which resembles the Adendorf lathe, but has variable speed. Using a 550W DC motor and 3 steps on the belt drive, it has a speed range of 650 to 3800 rpm. 305mm diameter by 430mm long (12” x 17”) workpieces can theoretically be accommodated, although remember to allow for clearance for the tool-rest banjo. The spindle thread is the widely used 1” x 8 tpi with #2 MT sockets in the head and tail stocks. The 550W motor is powerful and should be adequate for most tasks, although, if you intend turning larger work pieces, check whether the minimum speed is low enough and the low-speed torque is adequate for your needs.

Next in the range is the **CT175VS1**. This lathe is nearly twice the weight of its baby brother, with increased capacity of 355mm x 500mm (14” x 20”). It has a 750W induction motor, with a variable speed inverter, which combined with three pulley ratios has a speed range of 100 to 4000 rpm. Due to the inverter drive and larger motor, the slow-speed torque is likely to be much more substantial than the DC motors of the smaller models. The spindle thread is the widely used 1” x 8 tpi with #2 MT sockets in the head and tail stocks.

Bed extensions are listed for the larger lathe, but not the smaller, so this is something to check if you are likely to want to turn longer workpieces such as table legs.

Technatool.

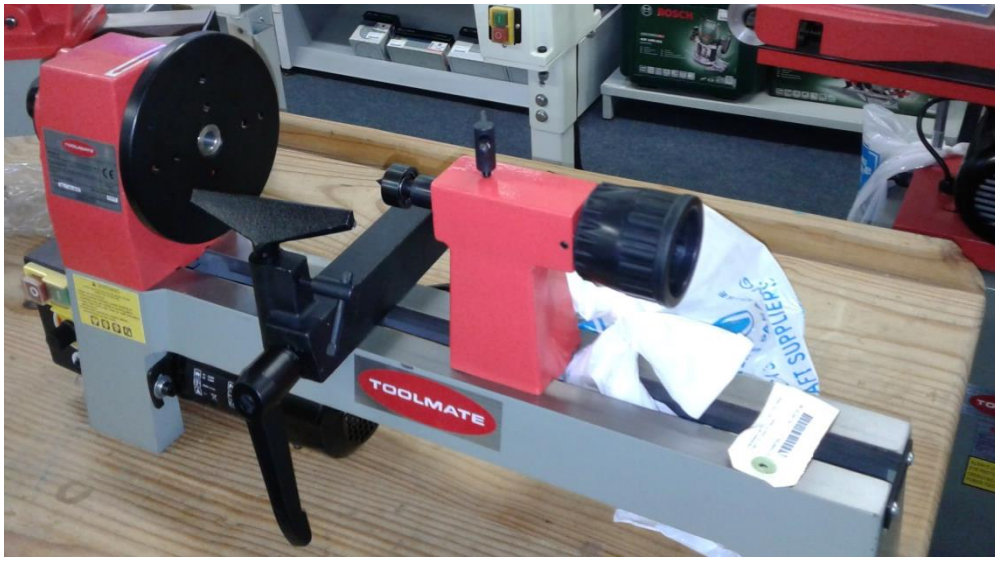
A Nova Comet II was purchased by the WWA for demonstrations, superseding the Jet 1014 Mini. In addition to a larger capacity than the Jet, with 305 x 420mm (12” x 17”), it has a variable speed drive. A 550W DC motor is used to provide variable speeds,

forward and reverse. Using three belt drive ratios (250-680; 530-1420; 1380-4000 rpm), it offers significantly more capability for demonstrations than the Jet 1014.

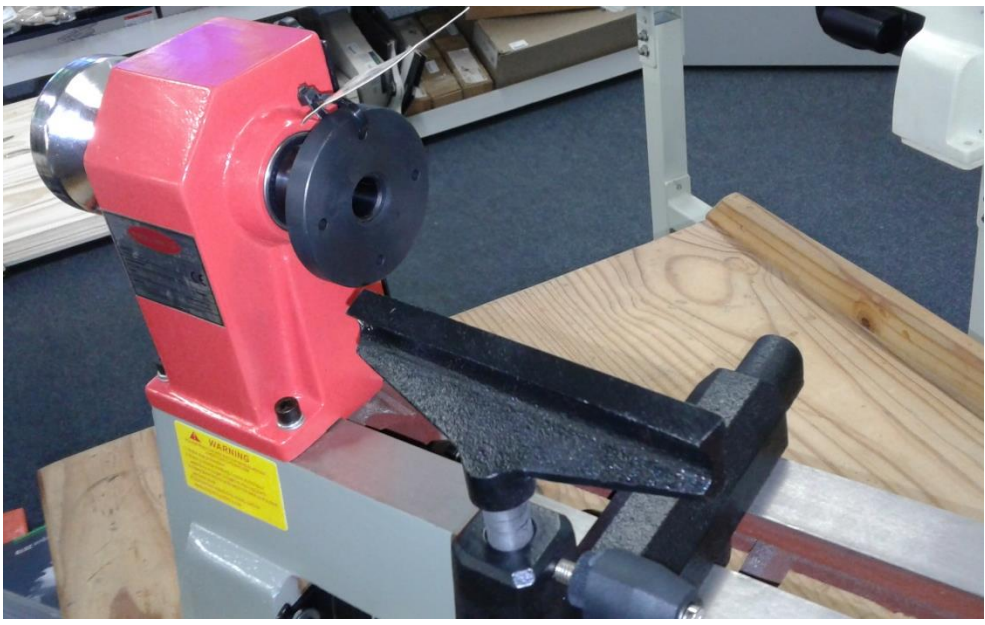
The belt cover swings up to expose the belts, so changes can be done by sight and not feel. Low speed torque is adequate on the lowest belt speed, except with larger workpieces, when a very light cut is required. It has a spindle lock/indexer and weighs about 40 kg. It has the usual 1" x 8 tpi head stock spindle thread and #2 MT sockets in the headstock and tail stock.

With use, a few issues have arisen with the example we have that you should bear in mind before deciding to buy one. The spindle lock needed fettling to stop it rattling against the spindle when disengaged. The tailstock quill lock is on the top and actually gets in the way if you are hollowing with the tail centre brought up for support. The locking screw was too wide at the point where it engaged into the slot on top of the quill, leading burring that eventually caused the quill to jam. Poena reduced the diameter of the pin to stop this. Some people don't like the tail-stock locking mechanism, as it is difficult to refit the tail stock once removed, although, I am sure that with practise, you will manage with this. The spring inside the locking lever needed to be replaced. Also, the lathe seems rather light for the swing capacity, but this can be addressed by bolting it down to the bench. The speed range markings on the speed control dial are so small as to be almost illegible, so we wrote the speed ranges on the bed.
These issues should be borne in mind when making a decision to buy.
A bed extension is available if required for longer workpieces. (See www.strandhardware.co.za for more information.)

Toolmate



Toolmate lathes are offered at several dealers, and imported by Strand.
The smallest model shown on the right is a variable speed unit, using a 250W (1/3 hp) DC motor, but with only one belt speed, giving speeds between 750 and 3200 rpm. Capacity is 300mm between centres, and it will swing 200mm over the bed, but not over the tool rest. Tapers are #1 MT and the drive spindle is 1" x 8 tpi.
It seems to be aimed specifically at miniature and pen turners. Given the single belt speed, small motor and high minimum speed of 750 rpm, it is likely to struggle with larger work pieces at slower speeds, so bear this in mind when making a decision to buy.



The next larger unit from Toolmate is the size equivalent of the other mini-lathes listed above with very similar specifications.
It has a 370W (1/2 hp) induction motor, giving 5 speeds from 500 to 3150 rpm by changing a belt. It will cope with 18" (457mm) between centres and will swing 10" (254mm) over the bed, less over the toolpost. With a 1" x 8tpi spindle and #2 MT tapers you will have a wide choice of accessories.

There is a lot of choice in the mini-lathe category, and good value for money to be had.

The above information is probably already out of date as I write this. The picture of the Toolmate shown above, taken at Hardware Centre in July 2018, differs slightly from the one shown on the Strand website on the right (Sep 2018). This is an example of the difficulties experienced by the local importers of machinery. The local market, relative to the rest of the world is minute, and the large manufacturers such as Jet, have very large minimum orders, so the locals have to piggy back onto other orders and they don't always get exactly the same machines twice in row – there may be cosmetic differences.