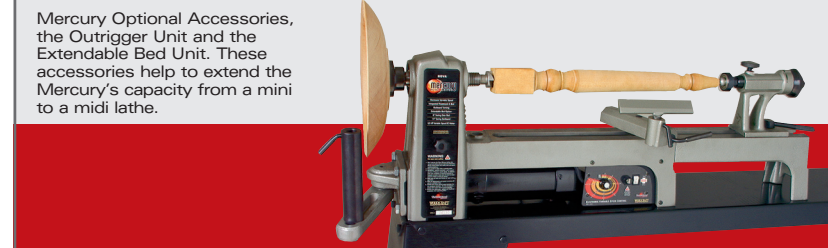


Teknatool Lathe Specifications	Nova Mercury	Nova 1624-44	Nova DVR XP
Power	1/2HP DC Motor	1.5 HP AC Motor Recommended Note, other motors can be added at users discretion.	DVR High Torque Direct Drive, 1.75 HP 115v Single Phase 15 amp supply 2 HP 220v Single Phase 15 or 20 amp supply
Capacity - Swing (Bowl diameter turning capacity)	8" (200mm) over bed. 10" (250mm) Recommend Outboard (using optional Outtrigger Unit). Technical Capacity up to 14" (350mm)	16" (400mm) Over bed 29" (740mm) Outboard (using optional Outtrigger Unit and head swivelled to 90 degrees)	16" (400mm) Over bed 29" (740mm) Outboard (using optional Outtrigger Unit and head swivelled to 90 degrees)
Capacity - Between Centres (Spindle Turning capacity)	11" (280mm) Between Centres, extendable in 12" (300mm) units using Optional Extension Bed	24" (600mm) Between Centres, extendable in 20" (510mm) units using the Optional Extension Bed	24" (600mm) Between Centres, extendable in 20" (510mm) units using the Optional Extension Bed
Spindle Size	1"8 Tpi RH	1 1/4"8 TPI RH M30 x 3.5 RH	1 1/4"8 TPI RH M33x3.5 RH
Internal Morse Taper (MT)	2MT	2MT	2MT
Spindle Index/Lock	Spindle Lock Only	24 Division Spindle Index	24 Division Spindle Index
Speed Range	Electronic Variable Speed 3 Speed Range 140-1750 rpm 320-3670 rpm 470-5350 rpm	8 Speed Manual 178-3000 rpm (Rest of World) 215-3600 rpm (USA & Canada)	Electronic DVR Drive Variable Speed 100-3500 rpm
Warranty	1 Year Motor and Electronics 5 Years all other componentry*	1 Year Motor 5 Years all other componentry*	2 Year Motor and Electronics 5 Years all other componentry*
Swivel Head	NO	360 degree full swivel and lock at any position, plus detent locating positions at 0,22,45 and 90 degrees. High accuracy and ease of swivel	360 degree full swivel and lock at any position, plus detent locating positions at 0,22,45 and 90 degrees. High accuracy and ease of swivel
Weight	59 lb (24.58kgs)	145lb (66kg) without motor	181 lb (82kg)
Standard Equipment (with the lathe)	60mm Faceplate, 6" (150mm) Toolrest, 2MT Live Centre, 2MT Spur Centre, Manual and Fastenings	150mm Faceplate (not in all countries, check with your reseller) 12" (300mm) Toolrest, 2MT Live Centre, 2MT Spur Centre, Manual and Fastenings.	3" (80mm) Faceplate (not in all countries, check with your reseller) 12" (300mm) Toolrest, 2MT Live Centre, 2MT Spur Centre, Manual and Fastenings.
Construction	Solid cast iron throughout, special vibration dampening web design on bed, heavy duty bearings.	Solid cast iron throughout, special vibration dampening web design on bed, heavy duty bearings.	Solid cast iron throughout, special vibration dampening web design on bed, heavy duty bearings.

Lathe Accessories

A wide range of accessories is available for Nova Lathes: Nova, SuperNova, Compac chucks, specialist jaw options, 2MTCentre System, toolrests, faceplates, handwheels and vacuum adapters, specialist attachments, extension beds, outtrigger turning units for larger turning, cast iron stand for maximum stability, chisel sets.

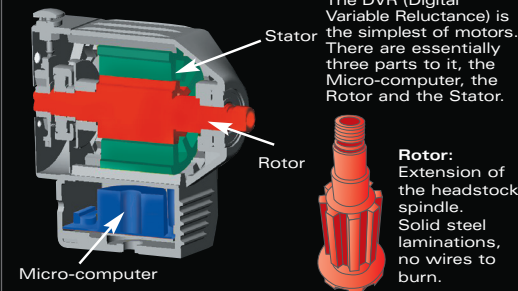


Mercury Optional Accessories, the Outtrigger Unit and the Extendable Bed Unit. These accessories help to extend the Mercury's capacity from a mini to a midi lathe.



Optional Outtrigger Accessory for the Nova 1624-44 and Nova DVR XP lathes. Enables up to 29" (740mm) diameters to be turned.

How does the DVR Motor work?

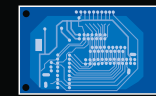


The DVR (Digital Variable Reluctance) is the simplest of motors. There are essentially three parts to it, the Micro-computer, the Rotor and the Stator.

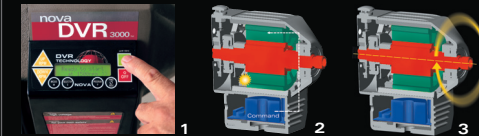
Rotor: Extension of the headstock spindle. Solid steel laminations, no wires to burn.



Stator: Electricity carrying component, containing copper coils. This provides the intense magnetic force to turn the spindle.



Micro-computer: controls switching of coils, intelligent sensing (knows exact spindle position at all times and constantly computing where spindle should be - at 2000rpm it is computing spindle position at 400 times a second or 24,000 per minute!).



When you enter a speed command (1), the computer switches on the coils in the stator (2). An intense magnetic field is created, and the rotor tooth is pulled to line up with the magnetic force (3) then the next coil is switched on, (pulling the spindle at the desired direction and speed range) and so on. All this is done very fast and accurately using computerised electronic switching.



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Reseller Details

Publication Code 101-0505-007
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www.teknatool.com

Innovative technology to power your woodturning

Nova Lathe Range



Why a Teknatool Lathe?

Heritage: Teknatool have been designing and making lathes and woodturning equipment for over 25 years. We've been at the forefront of a modern approach to woodturning and we design products to meet the needs of contemporary woodturners. Our NOVA™ woodturning lathes and equipment are well known and used all over the world.

Innovation: Teknatool has a proud history of shaping future directions in woodturning equipment and have always been highly regarded as woodturning innovators. We pioneered chuck design with a world first – the NOVA™ Chuck which revolutionized holding techniques back in 1989. Our R&D team collaborates with users and universities to develop smart products that meet real needs. Over the years we have developed the COLE JAWS™ for remounting bowls, original HITURN™ tipped turning tools, compact modular lathes, first commercial ornamental turner, first add on bed for lathes, the WOODWORM™ Screw to name just a few!

Our latest major innovation – the award winning DVR XP™ lathe has our revolutionary DVR motor technology with its powerful computerised drive. This delivers for the first time, an intelligent lathe that can aid the user to optimize their turning experience with safety sensing, fault sensing, self programmable features and so on. This intelligent motor delivers tremendous power and speed range, a beltless drive, and exceptionally smooth performance - bringing one of the most exciting, ground breaking improvements to woodturning since the electric motor.

Quality Construction: All the Teknatool lathes are made from solid cast iron throughout which is well recognized for strength and durability. Our lathes are designed using CAD/CAM engineering with Finite Element Analysis to achieve optimum strength, maximum rigidity and vibration dampening in all components. All components are manufactured to high standards of fit, finish and accuracy.

5 Year Warranty: We back our quality with a 5 year extended warranty on all lathe castings and components*. Motors & electronics are covered under separate 12 & 24 month warranties.

Feature Packed: Swivel heads, indexing, extendable beds, quick action cam controls, large bearings, large capacity and speed range, precision adjustments – these are just some of the features that combine to make Teknatool lathes best value.

Comprehensive Accessory Range: Chucks, special chuck jaws, centers, toolrests, outboard turning, add on bed sections – there are a wide range of optional accessories available for woodturning projects of every size and shape.

* See reseller, website or manual for further details.

The Features and Benefits of Teknatool Lathes

- Solid Cast Iron Construction Throughout
 - Spindle Index*
 - Sophisticated Swivel Head*
 - Solid 2MT Spindle and Quill
 - Vibration Dampening Bed Design
 - Extendable Bed Feature

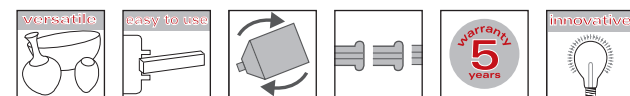


• Quick Action Camlock Controls

- Heavy duty twin and triple bearing systems designed to take heavy turning stresses.

*not applicable to Mercury

- Outboard Turning



The Range

Nova DVR XP

The DVR XP is an extraordinary lathe – Driven by an intelligent computer with ergonomic elements and components – it adapts and enhances to the human interface – it focuses all the elements necessary in a highly refined and powerful design for the woodturner to create the very best woodturning effortlessly.

The first lathe where the computer controlled motor and spindle is designed and built into the headstock. The DVR (Digital Variable Control) motor is controlled by a powerful computer which drives the motor and micro manages the power and performance conditions. There are many advantages to the DVR Computer Drive.

- Motor and lathe spindle are one. There are no belts or pulleys to cause vibration, wear and loss of power (up to 20% is common in traditional lathes)
- The DVR motor works by EMB (Electro Magnetic Boost) Technology, the power and torque is produced by powerful electromagnets. Power as in traditional AC motors is not a function of a narrow optimum speed. The DVR develops very high torque and power from very low to very high rpm.
- This is ideal from lathes where all the power is required at low rpm.
- The DVR generates incredible power – 1.75 HP from 115 V, 2.2 HP plus from 220V. More than enough for all the turning required on the DVR lathe – up to large bowls and 29" platters.
- The DVR XP can span easily an enormous range of turning from 1/8" diameter, small lace bobbins and pen turning right up to 29" platters – no other lathe is capable of this wide range of work.
- The DVR has the power to do it – up to 2.2HP at 220V
- The DVR has the speed range – infinitely variable from 100 up 3500rpm

- The DVR XP is capable of delivering the smoothest turning performance of any lathe on the market. Work is so smooth that in many cases, it does not need sanding. There are no vibrations from the transmission (no belts or pulleys) The DVR computer micro manages the spindle turning environment for optimum performance (at 2,000 RPM it receives back 400 positioning messages per second). It works to instantly dampen and smooth and vibrations.

Safety Feature

'Safety Sensing' The computer can sense abnormal, sudden loads applied to the turning which are outside its pre set parameters – for example a sudden chisel dig in – the computer sensing this instantly shuts down all power. A normal motor would just carry on with possibly dangerous consequences for the turner.

Energy Efficient

The DVR computer constantly intelligently monitors the power required to perform the turning work required. It only draws sufficient power from the wall socket for this – drawing more or less as required. This optimizes the power use of the DVR motor so only minimum power is drawn –resulting in power savings. Normal AC/DC motors just draw maximum power whether used or not.

Adaptive Control

The DVR XP can sense the weight of a workpiece and determine out of balance work to optimize motor performance to handle the workpiece.

Extra programable features

Five customisable speeds can be preset to increase efficiency. This can result in up to 5-10% or more increase in throughput and efficiency.

Swivel Head

The swivel head is able to be quickly and easily moved to the best position for the woodturner. Most turning positions are made more difficult by the bed – The DVR XP has a very easy swivel head which allows the turner to find the most comfortable position. The swivel is can be quickly and accurately locked back in line with the bed.

- Maximum turning capacity up the 29" (using optional Outboard accessory) is achieved with the head swiveled to 90 deg to bed. The DVR XP can be set up in a matter of seconds for large turning work. Other lathes require extensive alterations even for relatively modest turning work.



Close up of DVR electronics

Extendable Bed

Bed length can be customized to spindle turning needs – an extra 20" bed can be bolted on (overhanging the stand) for quick and convenient spindle work up to 44" – more than adequate for most requirements. For more specialized spindle turning requirements – as many extra 20" bed sections can be added as required. Some turners has turned 12' long or more spindles using this feature.

- Controls are all quick set, cam action to position with minimum effort and lock with off rigidly with no movement or creep.

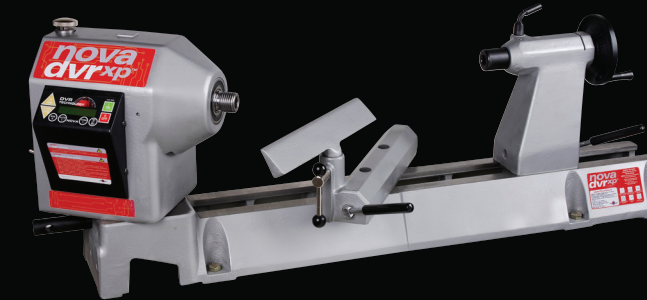
Dependable DVR Performance

Low Maintenance

The DVR drive is rugged and dependable – the brushless, solid steel rotor, heavy duty stator windings, industrial grade electronics all combine to make for a low maintenance, trouble free drive.

TRIMAX Triple Bearing System

The unique Trimax bearing system is a triple bearing design (using the same well proven Nova 1624-44 bearing design) to provide a smooth, heavy duty load bearing support for the spindle which can easily absorb large turning stresses.



Nova Mercury 1/2HP

Superbly suited to smaller projects, the generously powered 1/2HP Mercury has the flexibility to also handle midi sized projects with ease (up to 10" bowls and 23" spindles, using the optional outrigger and bed extension accessories).

The Mercury is a true mini - at 59lbs and 21" long it is easily carried and stored - this extends your turning horizon outside the confines of the traditional workshop. Larger traditional midi type lathes are much heavier and less portable.

The Mercury electronic variable speed function offers a new turning dimension not found in manual speed mini lathes. With a wide speed range (no need to put up with a restricted speed options) at the turn of a knob.

The Mercury delivers excellent power, performance and flexibility in a compact package – better than any other midi lathe on the market.



Nova 1624-44

Our very popular Nova 3000 set the industry standard for a well priced, mid range lathe. There are thousands of delighted turners worldwide using this model today. Our new Nova 1624-44 model updates and improves an already classic lathe. It has a great range of features which together put this lathe into a class of its own when compared to similarly priced, and more expensive machines.

Great Versatility

Turn work from 1/8" diameter right up to 29" platters and everything in between. Very few lathes can cover this range well. Small Turnings: You need high speeds – with the 3600rpm speed this makes it capable of producing very small goblets, bowls and even pen turning. The controls are right sized to quickly and conveniently position for small work. No other lathes of this size have this small turning capability.

Large Turning: 16" inboard capacity and using the optional outrigger accessory up to 29" platters outboard – and every diameter in between. Requirements for larger turnings are very slow speed and a stable turning platform enabled for larger work.

The Nova 1624-44 has got two low speeds below 400 – 214 & 360rpm which is need for heavy, out of balance, or work over 18". But it also has strong and convenient optional outboard accessory for toolrest support. This feature combined with the swivel head makes the lathe easy and quick to convert for larger turning.

Power

Large turning work requires power – the 1.5 HP motor delivers 50% more power than other comparable lathes. It enables you to do larger greenwood bowl turning, deep hollowing work, use bowl savers – work that could not be done on a 3/4 or 1 HP machines. Great extra feature is a reversing function which is really well suited to sanding optimum sanding operations.

No other lathe – large or small has got quite this combination of features. This makes it a particularly suitable lathe for beginning turners who want a lathe that will be able to meet their growing woodturning horizons. It would also appeal to the experienced woodturner who wants maximum performance from a modest budget.

Compact

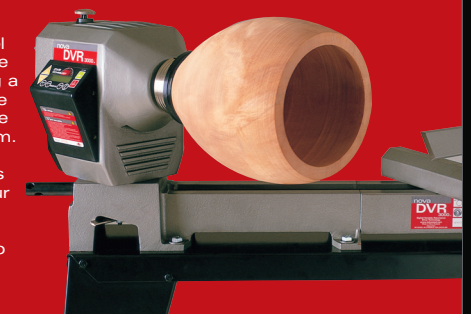
Small footprint of this lathe make it particularly suitable for large capacity work in a small or crowded workshop. Although robust and strong, it is able to be moved around the workshop to accommodate space required for different projects – for example rearranging your workshop for a staircase or balustrade project. Here, a big heavy, long and fixed position lathe becomes a real problem. With the 1624-44 you can add a bed section to do that extra spindle work when required – then easily unbolt and store.



Swivel Headstock

This simple design feature will change your turning life forever! Perfect for all bowl or free end turning, large or small - no more leaning over the bed (reduces back strain) – you can turn in the most comfortable position for you. The swivel head increases your useable workshop space, you can use same inboard chisel cutting technique and it eliminates the need for lefthand spindle fixtures.

Rock solid stability and precision alignment make the Nova DVR XP and the Nova 1624-44 swivel head one of the best - ensuring a stable, accurate and trouble free turning platform. Talk to any turner who has experienced our swivel head feature – they would never go back to a fixed head lathe.



Extendable Beds

Want to turn longer spindles? Nova lathes deliver this flexibility.

By simply adding just one bed extension*, the between centre capacity of the Nova 1624-44 and the Nova DVR XP can be extended to 44" (1117mm). That's longer than most fixed bed lathes - and you can add as many bed extensions to the standard lathe as required.

The Mercury also has an extended bed function.

* Extra bed extensions are optional accessories.



Advantages of DVR Motor over conventional motors

Does the Drive.....	Conventional AC Drive	Conventional DC Drive	New DVR Drive
Have Brushes to wear and fail?	✗	✓	✗
Have Rotor windings to fail and overheat?	✓	✓	✗
Use Pulleys, adding to friction and vibration	✓	✓	✗
Have efficient power reducing stress and wear on components?	✗	✗	✓
Use Belts, causing friction, vibration and wear?	✓	✓	✗
Deliver maximum torque to the spindle over the entire speed range?	✗	✗	✓

Note, if you want to learn more about why the DVR Drive is so advantageous over traditional drive designs, visit our website on www.teknatool.com to download full technical specifications.