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COMET I4 DR

STORE GUIDE

The NOVA Comet 14 DR continues the legacy of the Comet Midi Lathe with expanded capacity and digital functionality. Solid cast iron lathe with Digital Readout and a 14” Swing Capacity. The NOVA Comet 14 DR is the perfect solution for a wide variety of projects from small pens to larger bowls and platters.

SKU: 46900
teknatool.com

To order, contact Marisol Edwards
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VERSATILE VARIABLE SPEED RANGE	2-step Electronic Variable Speed range. Low range: slower speeds from 250 RPM up to 1,100 RPM for larger spindle and bowl work. Fast range: from 750 RPM up to 3,450 RPM for miniature turning work and sanding
EASY TO USE SPEED DIAL ADJUSTMENT	Quickly dial-in the correct speed for the job, material and conditions. You're not limited to potentially dangerous fixed-speed steps. The NOVA Comet 14DR is the perfect solution for a wide variety of projects from small pens to larger bowls and platters. The easy to read screen lets you know at what speed you are turning.
FORWARD AND REVERSE	Quickly and easily change direction between forward and reverse. This offers you additional flexibility and allows you to achieve a superior finish, reducing the need for extensive sanding.
14" SWING **18.5" BETWEEN CENTERS**	14"/356mm Capacity Over Bed 18.5"/470mm Between centers standard 44.1"/1,120mm between centers with ONE extra accessory bed extension (extra purchase) to extend the beds as long your project demands.
CAST IRON CONSTRUCTION	CAD designed webbing to absorb vibration throughout the bed length. Exceptional structural strength, precision machined for superior fit and finish.
EASY BELT/PULLEY ACCESS	Quick and easy to lift cover and adjust belt.
STRONG 2MT SPINDLES	The precision machined 2MT allows for quick and secure mounting of accessories.
QUICK ACTION CAM CONTROLS	With comfortable rubber grip for fast and secure locking
LARGE RANGE OF NOVA ACCESSORIES	NOVA Chucks and Jaws, Faceplates, Chisels, Centers all enhance your use of the NOVA Comet 14DR Midi Lathe.

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	Imperial/Metric
Swing Over Bed	14”/356mm
Distance Between Centers	18.5”/470mm
Swing Over Tool Rest Base	11.25”/ 285.75mm
Maximum distance Tool rest to spindle center	8.5625”/217.49mm
Footprint	32.4”/822.32mm (L) x 8.5”/215.9mm(W)
Weight	103.6 lb/47 Kg
Spindle Thread	1” x 8TPI (Right Hand Thread)
Headstock Spindle taper	Morse Taper 2MT
Spindle bore	.4”/10.31mm
Quill taper	2MT Morse Taper
Tool rest width	6”/152.4mm
Tool rest shaft diameter	1”/25.4mm
Tool rest post length	3.5”/88.9mm
Tool rest base height	3.125”/84.14mm
Bed	Precision – ground cast iron
Frame, headstock, tailstock	Cast iron and steel
Paint type/finish	Enamel/powder coat
Bed width	8”/203.2mm
Faceplate size	3.14”/80mm
Input voltage	120v
Input frequency	60Hz
Full Load Input Current Rating	7.3A
Power Input Plug Type	NEMA 5-15P
Motor type	Universal Brush Type
Motor power output	0.75KW (1HP)
Phase	Single Phase
Input current	7.3A

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FEATURES TO POINT OUT:

1. 14” Swing over the bed- Additional capacities versus the competition and no accessories to buy
2. 1HP Motor
3. Digital Readout – no guesswork on recommended speed
4. 18.5” Between Centers with 44” if you add the 46901 Bed Extension
5. Easy Belt change access and lock handle for tensioning
6. Two Speed RPM Range: Low 250 - 1,100 RPM and High 750 - 3,450RPM
7. 1” Tool Rest Post, with 6” Tool Rest is part of the Nova Modular System which allows additions rests to be added easily and economically
8. Forward and Reverse for Turning and Sanding
9. Quill Pin Lock to eliminate rotation of the quill if handle not locked
10. Scale on tailstock for accurate adjustments
11. 12 Step Indexing
12. 1” X 8TPI Spindle with 2 MT for all your favorite accessories
13. Includes 3” Faceplate, 6” Modular Toolrest, (2) Live Centers, Spur Center, and Knockout bar
14. Stand 47050 and Bed Extension 46901 available as accessories

MOTOR BREAK IN OPERATION

Run the lathe motor without any load for approximately 30~45 minutes before you start using the lathe to cut wood/ or applying a significant load. The motor and bearings break-in should be done at the fastest speed possible and not be unattended.

The NOVA COMET 14DR features a variable speed DC motor that contains brushes that make physical contact with the motor rotor. For the best motor performance and life, the motor brushes should be slightly worn out to ensure the brushes are making good contact.

Note: A clicking/swishing noise in the motor is normal which will reduce as the brushes wear in.

⚠ WARNING ⚠

Before plugging the NOVA COMET 14DR lathe, shut off the power source in your shop

Figure 1 - 110v Outlet

Figure 2- 220v Outlet

The power cord installed on the NOVA COMET 14DR lathe will have a grounding three-prong plug. The plug must be connected to a matching outlet that his properly installed and grounded in accordance with local electrical codes.

For 115V outlet only:
A temporary adapter can be used to plug into a two-pole outlet if a three-prong outlet is unavailable in your environment. The ground tab on the adapter must be connected to the screw on the outlet for proper grounding. This adaptor should only be used until a qualified electrician can install a properly grounded outlet.

- **Note:** If an extension cable is required, make sure to check the following:

1. Extension cable gauge
2. Is the cable properly insulated?

If in any doubt, please contact your local electrician to inspect the cord according to the local electrical standards before using it.

Surge Protection (Ground Fault Interrupters (GFI) / Residual Current Detectors (RCD)
It is recommended to use a surge protection device rated to 15A for the best protection of the lathe. GFI and RCD are the recommended standard type of surge protection device.

Note: We don't recommend using an extension cord. If you have to use an extension cord, it should be a 10 or 12 gauge wire and no more than 12 feet long.

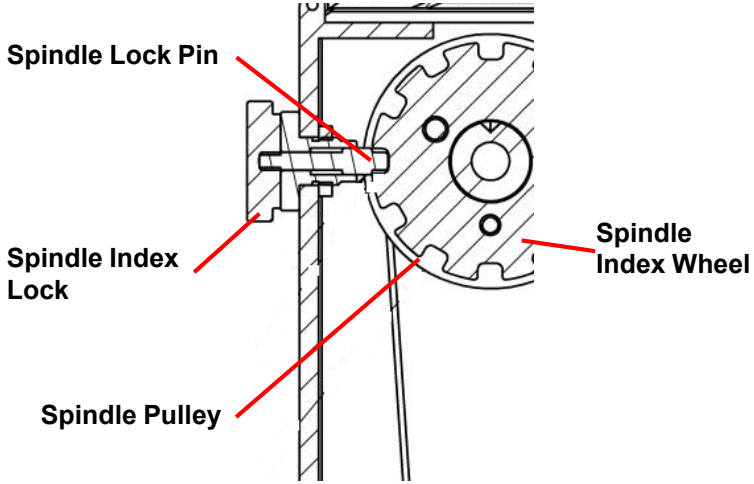
USING THE SPINDLE INDEX

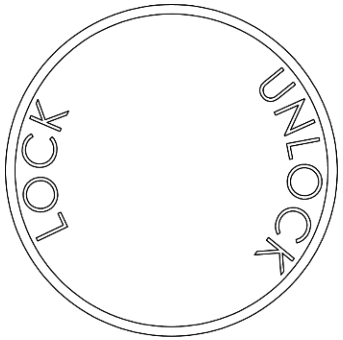
There are 12 index positions on the NOVA Comet 14 DR spindle; 30° apart.

Locking and Unlocking the Spindle

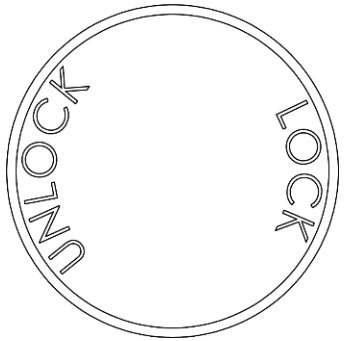
Pull the lock pin away from the headstock and turn the lock pin 180° to switch between the lock and unlock positions.

Looking from the back side of the lathe, the state that is described on the right-hand side shows the spindle lock state:





Unlocked Position



Locked Position

CHANGING THE SPEED

Turn the knob clockwise to increase spindle speed.

Turn knob in counter-clockwise to reduce the spindle speed.

Decrease Speed

Increase Speed

NOVA COMET 14 DR features two speed positions:

Speed Band	RPM Range	Type of Work
1 (Motor pulley small, Spindle pulley big)	250 ~ 1,100	Large faceplate and spindle work
2 (Motor pulley big, Spindle pulley small)	750 ~ 3,450	Small turning, Sanding and miniature turning work

SWITCHING BETWEEN FORWARD AND REVERSE

The forward and reverse can be switched by holding down the **<FWD/ REV>** key until the LED light starts flashing on the alternative line.

Press the **<FWD/ RED>** key once before to make the LED solidly lit before pressing the **<ON>** button to start the lathe motor

Long Press

CHANGING BELT POSITIONS

Ensure the lathe is powered off and disconnected from the power source before commencing to change the belt positions on the lathe to avoid accidental motion during the belt changing procedure. Loosen Motor Lock Knob before lifting the handle. Lift the Motor Place Handle upwards to unlock the motor relieving tension on the belt. Unscrew the headstock guard knob to unlock the headstock guard.

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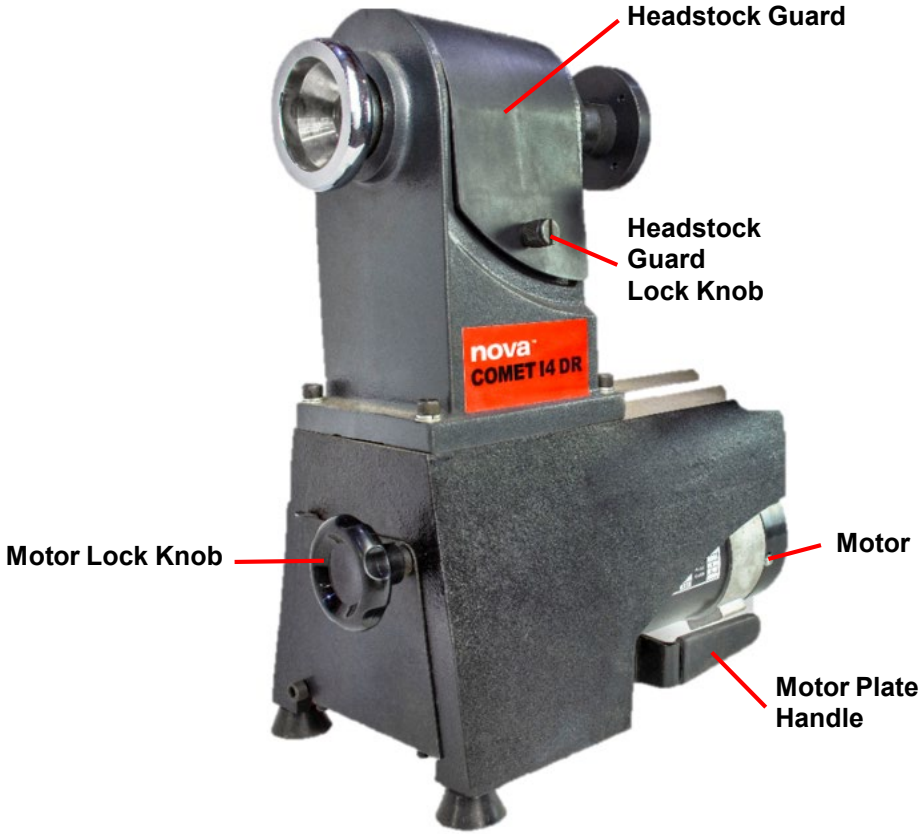
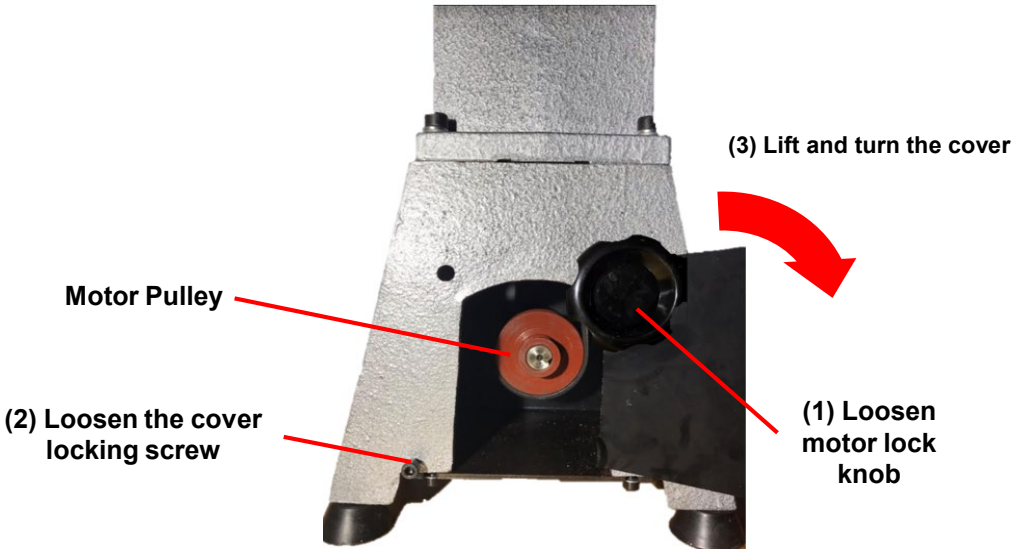
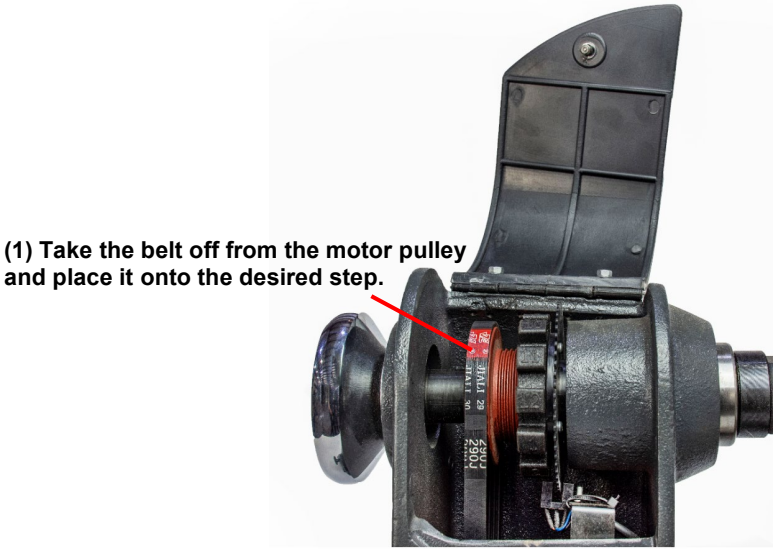


CHANGING BELT POSITIONS (CONT.)

Open the bed belt cover by loosening the motor lock knob to gain access to the motor belt pulley. Lift the headstock guard to open and gain access to the spindle pulley + belt.

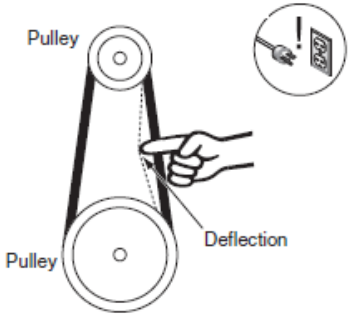
Remove the drive belt from the motor pulley by lifting the motor handle plate and making enough space. There will be approximately ¾" (20mm) of vertical movement on the motor handle





1. Place the belt onto the desired spindle pulley once the belt is removed from the motor pulley.
2. Place the belt on the corresponding step on the motor pulley.
3. Apply a firm downwards force by a thumb onto the motor handle plate to tension the belt.
4. **Caution:** Excessive belt tension may cause the belt or the pulleys to break.
5. Turn the bed belt cover to close and relock the cover.
6. Tighten the motor locking knob while applying correct tension.

7. Check the belt tension by applying moderate pressure at approximately halfway between the spindle pulley and the motor pulley. The belt should have a deflection of approximately ½" (13mm) when an appropriate tension is applied on the belt.



TROUBLESHOOTING MECHANICAL ISSUES

Symptom	Place to check	How to resolve
Excessive Vibration	1. Work attached to the lathe 2. Lathe Mounting (either on bench or stand)	Slow the lathe speed down Add weight to the machine or bolt the machine down to a solid platform. Check the spindle runout by using a *DTI.
Faceplate/chuck not running true	1. Back of face plate 2. Threads (Inner threads on faceplate and spindle thread on headstock) 3. Front of face plate 4. Chuck threads 5. Jaws	1. Ensure the back of the faceplate is making firm contact with the spindle base. 2. Check the lathe spindle thread by using a *DTI to ensure the spindle itself is running true. 3. Make sure face plate is flat 4. Chuck is fully tightened on to the spindle 5. Jaws are installed properly
Turning tools not sliding smoothly across Tool rest	Tool rest surface / Bed Surface	Ensure the tool rest surface and bed is smooth without any chips, cracks of burrs.
Spur Drive Center/Live Center not holding into the spindle taper/quill taper when turning	Morse Taper surface	Clean the Morse Taper surfaces (both tool and spindle) with a cleaning agent. Should also mention if mounted in tailstock. A live center will not be used in a headstock
Tailstock and Headstock center not lining up correctly	Headstock alignment	Loosen the headstock casing from the bed and make the required adjustment.
Tailstock Handwheel hard to turn or will not turn	1. Quill lock 2. Inside the tailstock quill housing 3. Quill internal threads	Check if the quill lock is not engaged. 1. Remove the tailstock quill from the tailstock body and inspect both quill surface and quill housing surface. 2. Clean the quill and quill housing to ensure ~~not~~ no foreign materials exist. 3. Lubricate both quill and housing surface and reassemble the tailstock.
Tailstock binds	1. Lathe bed 2. Tailstock adjustment plate	1. Slide off the entire tailstock from the lathe bed and inspect the top lathe bed surface and bottom tailstock surface. 2. Apply light lubricant to the top lathe surface if there are no defects on both surfaces. 3. Adjust tail stock nut tension

*Dial Test Indicator

TROUBLESHOOTING ELECTRICAL ISSUES

Symptom	Place to check	How to resolve
Lathe does not turn on **(No lights on the control panel)**	1. Power source 2. Fuse/Reset button 3. Controller	1. Check power source is providing power 2. Check the fuse/reset button is not popped out. Press the reset switch and repower on the lathe 3. If the above 2 solutions did not resolve the problem, may require replacing the controller. Please contact our customer services: service@teknatool.com

PACKAGE CONTENTS

SKU: 46900
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Item #	Description	SKU	Qty
1	Comet 14 DR Lathe	46900	1
2	Faceplate	4718065	1
3	Spanner	4718071	1
4	Heavy Duty Live Center	4718069	1
5	Live center	4718066	1
6	Spur center	4718064	1
7	3mm Hex Key	AK03	1
8	5mm Hex Key	AK05	1
9	8mm Hex Key	AK08	1
10	Operating/Knock Out Bar	4718071	1
11	Handwheel	471834	1
12	Handwheel Handle (not pictured)	4718035	1
13	Handwheel Handle Screw (not pictured)	4718036	1
14	Power Cord (not pictured)	4718063	1
15	Tool Holder	4718072	1
16	Tool Rest Post	9025	1
17	Tool Rest Bar	9027	1