



NOVA PRECISION MIDI SELECT CHUCK INSTRUCTION MANUAL

Thank you for purchasing NOVA Precision Midi Select Chuck - the ideal chuck for Mini, Midi and smaller lathes with up to 12" diameter swing. We are confident that it will enhance your woodturning capability. The Precision Midi Select is designed for a range of wood holding modes while being quick and easy to use.

YOUR SAFETY

IMPORTANT PLEASE READ & UNDERSTAND THIS INFORMATION BEFORE USING YOUR PRECISION MIDI SELECT CHUCK.

DANGER: THIS CHUCK IS CAPABLE OF CONTRIBUTING TO SERIOUS INJURY, AS WITH ANY OTHER POWER TOOL ACCESSORY, IF USED IMPROPERLY ON THE LATHE.

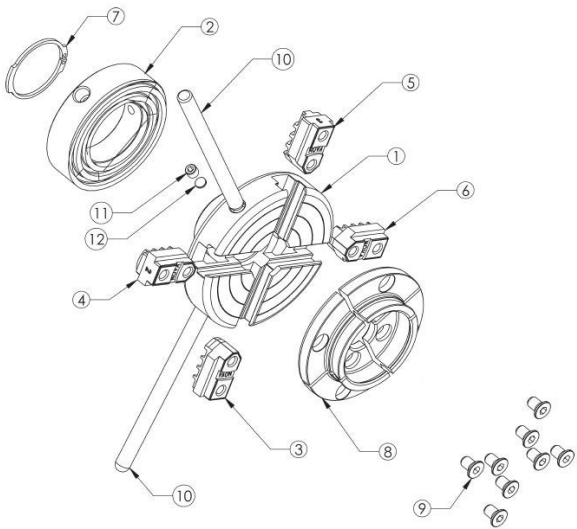
Please also read and understand the lathe owner's manual. If you do not have a manual, contact the supplier of your lathe to obtain one before using the lathe and Chuck.

User must be professionally trained to use this chuck. Vocational school courses are recommended. As with other chucking methods, an extremely cautious and sensible approach is necessary. Follow closely strict guidelines in this manual for different jaw types on wood blank diameters and length, plus turning speed.

BEFORE USING THE PRECISION, MIDI CHUCK MAKE SURE THAT -

- ALWAYS WEAR EYE PROTECTION WHICH COMPLIES WITH CURRENT ANSI STANDARD Z87.1 (USA). WE RECOMMEND THAT A FULL-FACE SHIELD TO BE USED AT ALL TIMES.
- Make sure chuck is properly secured on lathe spindle. Follow mounting instructions for your lathe or faceplates and other spindle fixtures.
- For safety, DO NOT ROTATE CHUCK UNDER POWER WITHOUT WOOD BEING GRIPPED.
- **WARNING: EXCESSIVE SPEED IS A SERIOUS LATHE HAZARD. ALWAYS TURN AT THE SLOWEST SPEED POSSIBLE.**
- Speed will vary with wood blank size. The larger the blank, the slower the speed. Consult your lathe manual or lathe information plate for speed guidelines.
- DO NOT ATTEMPT TO USE THE CHUCK UNLESS THE LATHE SPEEDS ARE KNOWN, YOU MUST STRICTLY FOLLOW THE MAXIMUM SPEED LIMITS SET OUT IN THE OPERATING SECTION OF THIS MANUAL. DO NOT EXCEED THEM UNDER ANY CIRCUMSTANCES.
- EXAMINE WOOD CAREFULLY. ONLY MOUNT WOOD THAT IS SOUND, if any cracks, splits, or weakness is found in wood - DO NOT MOUNT ON CHUCK. DO NOT MOUNT ANY WOOD THAT IS LIKELY TO BREAK UP DURING TURNING (E.G. ROTTEN OR SPONGY WOOD). DO NOT USE POORLY JOINTED/LAMINATED WOOD.
- Make sure wood is clamped firmly. Follow mounting instructions for different gripping modes and jaw types. In the expansion mode do not use undue force or jaws may split the wood.
- Do not exceed maximum guidelines in this manual for wood blank diameters/length set out in this manual for different modes and jaw types. **DO NOT USE WITH ANY COPYTURNER OPERATIONS**
- Check wood is securely held in chuck before operation. Check grip by vigorously wrenching wood blank back and forth. If any loosening occurs, re-examine holding area for adequate grip (Follow mounting guidelines) and any damage to holding area. Rotate manually to make sure of clearance before switching power on.
- **WARNING FOR SAFE OPERATION. IT IS RECOMMENDED THAT TURNING BE CARRIED OUT WITH JAW SLIDES NOT EXTENDING BEYOND THE CHUCK BODY. HOWEVER, THE JAW SLIDES CAN EXTEND ABOUT 6.35MM (1/4") BEYOND THE BODY OF THE CHUCK TO GIVE A WIDER RANGE OF EXPANSION, IF REQUIRED. EXTRA CAUTION MUST BE EXERCISED WHEN TURNING WITH JAW SLIDES EXTENDING BEYOND THE BODY OF THE CHUCK.**
- Irregular or out of balance stock needs to be turned at the slowest possible speed until it is in balance. For use on outboard/left-hand rotation - **MAKE SURE INSERT IS SECURELY LOCKED WITH GRUBSCREW BEFORE USE.** Use only hand and woodturning chisels to shape wood being held in chuck.
- USE THE RIGHT CHISEL FOR THE JOB AND DO NOT FORCE TOOLS. Use safe and commonly approved chisel techniques. **Wherever possible stand to one side of the revolving wood.**
- WEAR PROPER CLOTHING. Do not wear any loose clothing, neck ties, gloves, bracelets, rings or other jewelry that could get caught in moving parts. Wear protective hair covering to contain long hair.
- DRUGS, ALCOHOL, MEDICATION. Do not operate chuck or lathe while under the influence of drugs, alcohol, or any medication.
- KEEP CHILDREN AND VISITORS AWAY. All children and visitors should be kept in safe distance from the work area.

Make workshop childproof with padlocks, master switches, or by removing starter keys.



FITTING CHUCK TO LATHE

Check if the chuck thread specification matches the lathe spindle thread you have.

This is important for accuracy. The chuck body must contact an accurate register on lathe, either a shoulder on spindle or bearing face etc. to ensure chuck will run true. Any modification required (e.g. spacer) would be the responsibility of the customer. A good check is to see whether it screws home the same as a faceplate or similar spindle fitting.

DO NOT USE UNLESS CHUCK IS PROPERLY FITTED TO SPINDLE

CHUCK OPERATION

Adjustment: Two levers are provided for adjustment of the jaws - one fits into the chuck body, the other into the scroll ring, please refer to chuck diagram for lever positions. If your lathe has a spindle lock, then you only need to rotate with the scroll ring lever. Remember to release spindle lock after adjustments. Using two levers, hold the chuck in place with the body lever and rotate the other lever in the scroll ring to



activate jaw movement. To achieve faster action, you can rotate both levers:
 a) Chuck facing you. When the two levers are pulled together the jaws will contract (further inwards). This action will contract jaws around a spigot for clamping.
 b) Chuck facing you. Pushing the levers apart will expand the jaws (travel outwards). This action will expand jaws into a dovetail recess for clamping. When clamping makes sure to give an extra squeeze on the levers to give a final 'nip up' to the jaws. Use tailstock to help support work in chuck while clamping.

Action Adjustment: Refer to parts diagram. This is an optional and unique feature of NOVA chucks where a 6mm grub screw is adjusted to change the action of the chuck more to user requirements (usually to achieve a stiffer movement). As the grub screw is screwed against the fiber washer a tighter action result.

MOUNTING & DISMOUNTING OF JAWS

The Precision Midi Select chuck comes with no jaws attached. With the many jaws available, it is very easy to use your single chuck for a very wide range of applications. All jaws in the Teknatool range for the Precision Midi Select are secured and attached the same way.

Attaching Jaws - To mount the jaws to the Precision Midi Select chuck is another easy process. Firstly, wipe clean all jaw slides making sure a clean contact. Repeat this with all four jaws you wish to attach. Jaw slides are numbered one to four and have a corresponding jaw - of the same number. Place a jaw on its correct jaw slide and position into the groove (location ring out from the jaw into the groove of the jaw slide). The first few times you may need to GENTLY tap the jaws into the locator slot with a block of wood or plastic mallet. Place M6X10 counter sunk screws in jaws and screw them to finger tight (a little grease smeared under the heads at this stage will make the later removal easy) When both screws are in tighten them up and back them off half a turn. Repeat this on the remaining three jaws. Now using the operating bar, scroll all jaws towards middle until they all come together. Now with all jaws touching and exerting equal pressure on each tighten all screws up. This will ensure a perfect run out. Check if there are gaps between the jaws. If this happened, it will probably be due to a jaw being placed on a wrong jaw slide. (e.g. a #2 jaw on a #3 jaw slide)

Removing Jaws - using the 4mm Allan key supplied, unscrew all M6 counter sunk screws (there are eight of them). The jaws will come away once screws are released. However sometimes due to dust particle build up after heavy turning, the jaws may need a very light tap with a plastic hammer to dislodge them. It is important to keep them in their set and do not mix them up with other jaws of the same type.

FORMING A MOTRIS/RECESS OR TENON/SPIGOT

There are two main types of technique used to hold a workpiece onto the chuck: Tenon (Spigot) and Mortis (Recess). In either case the forming of a proper dovetail will ensure that the jaws will perform to their maximum ability.

In either case, to form a dovetail in the mortis/recess or on a tenon/spigot, the workpiece must be securely mounted on the lathe with a woodworm screw (Or equivalent such as a faceplate or between centers).

Note:

The procedures below show the general formation and uses of both the mortis/recess and tenon/spigot. However, it is up to the user's experience to determine the ideal size of the recess and spigot size based on the jaws they are using.

ITEM NO.	QTY.	PART NO.	DESCRIPTION
1	1	48100	Midi Chuck
2	1	48116	Scroll Ring
3	1	23051	PM Jaw Slide 1
4	1	23052	PM Jaw Slide 2
5	1	23053	PM Jaw Slide 3
6	1	23054	PM Jaw Slide 4
7	1	EC48	Circlip External 48mm
8	4	10029	Jaw Set 50mm
9	8	CM5010181	Screw C/Sunk
10	2	79458391	Operating Bar
11	1	G0606	Grub Screw
12	1	NS1000	Washer Fibre

FORMING MORTIS/RECESS

A mortis/recess is a hollowed-out portion with which the jaws sit in. A tapered side wall with angles of approximately between 75-80degrees (one side) is recommended for better gripping strength and safety.

The dovetail angles on the jaws are originally designed to fit the standard skew chisel. The skew chisel will naturally form the dovetail angle needed for the dovetail.

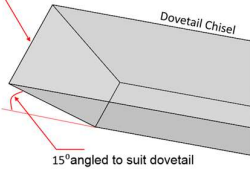
Image below illustrates the profile of a typical skew chisel profile and how to correctly use it to cut a dovetail recess in the workpiece:

Keep the leading edge of the chisel flat onto the workpiece (i.e. Bottom surface of the mortis/recess). Move the chisel forward and out to form the recess to the required diameter and depth.

Note:

FOR SAFETY REASONS NOVA STRONGLY ADVISE AGAINST USING ANY OTHER TOOL APART FROM THE NOVA DOVETAIL CHISEL AND SKEW SCRAPER CHISEL.

This edge is kept against wood



FORMING A TENON/SPIGOT

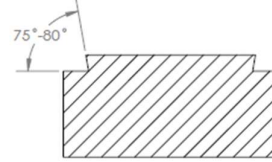
A tenon/spigot is a protruding cylinder formed for the accessory jaw segments to securely grip the workpiece. A tapered side wall with angles of approximately between 75-80degrees (one side) is recommended for better gripping strength and safety.

The dovetail angles on the jaws are originally designed to fit the standard skew chisel. The skew chisel will naturally form the dovetail angle needed for the dovetail.

It is recommended turn between centres for all pieces whenever possible.

Ensure the side surface of the tenon/spigot has the proper dovetail profile. If the tenon/spigot is straight, the piece may not be secured properly and dislodge from the chuck.

Image below illustrates the profile of a typical skew chisel profile and how to correctly use it to cut a dovetail recess in the workpiece:



Recommended Diameter of the Mortis/Recess

General rule to determine the suitable diameter and depth of the recess:

1. Recess diameter should at least be 5mm 3/16" bigger than the outer diameter of the jaws when completely contracted on the chuck.
2. Recess diameter should at least be 5mm or 3/16" smaller than the outer diameter of the jaws when completely expanded on the chuck.

Recommended Diameter of the Tenon/Spigot:

1. Tenon/spigot diameter should be 6mm larger than the internal diameter of the jaws when completely contracted on the chuck.
2. Tenon/spigot diameter should be 6mm smaller than the internal diameter of the jaws when completely expanded on the chuck.

The length/ height of the spigot should be no longer than the length of the dovetail feature of the jaws being used.

WARRANTY

Serial Number:

You can register your warranty online by visiting www.teknaatool.com

This 1 Year warranty period starts from the date of purchase. Teknaatool International Ltd hereby agrees to make repairs or replace components without charge for any defects due to faulty material or workmanship, provided that-

- a) The warranty period has not elapsed. Proof of purchase date (sales slip, registration of warranty etc.) would need to be forwarded to Teknaatool International.
- b) If, in our opinion, the unit has not already been altered, repaired or modified in any way that would affect its operation; has not been subjected to misuse, negligence, accident or not used strictly in accordance with instructions.
- c) Where necessary, transportation is prepaid by the customer to the Factory Service Centre (or other authorized Teknaatool Service Centre)

Warranty does not cover costs or damages arising directly or indirectly from the operation of this Teknaatool product. No other guarantee, written or verbal is authorized by Teknaatool International Ltd. Our Teknaatool Distributors can issue their own warranty to cover this product. Their terms may vary from what is stated above - please check with your dealer if you have any questions. Email our service contact: service@teknaatool.com.

Our policy is one of continuous improvement. We therefore reserve the right to change specifications/designs without notice.



Fits NOVA & SUPERNOVA Accessories
Ideal for Mini, Midi and all lathes up to 12" swing over bed



Fast, strong grip
Ideal for your Woodturning

PRECISION MIDL SELECT CHUCK

Fully compatible with all NOVA, SuperNOVA and SuperNOVA2 accessories. Widest accessory range of any chucking system on the market means you can tackle wide range of projects.

Screws directly into your lathe spindle (same as a faceplate) Most popular thread sizes are available 1" 8TPIRH, 3/4" 16TPI

Learn More
Visit our website

Screw chucking function, using the NOVA Woodworm Screw (included with chuck) For the first stage mounting of wooden bowl blanks.

www.teknaatool.com

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