



SuperNova[®]
Deluxe 5in Chuck
MANUAL



READ THIS MANUAL CAREFULLY
AND FAMILIARILISE WITH
CHUCK OPERATIONS THOROUGHLY BEFORE USE.

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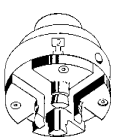
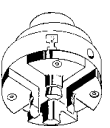
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JS25N 25mm Jaw Set
 Designed for small bowl (expanding dovetail mode) and small spigot (contracting mode) free end turning work below the size that can be handled by the standard 50mm jaws.

JSPIN Pin Jaw Set

These special 25mm extended jaws are designed to act like a pin chuck - expanding into a pre-bored hole. This is a useful technique for free form edge bowls. The real advantage though is you don't have to bore an exact size as with pin jaws. The longer jaws allow for a very powerful spigot grip for smaller work like lace bobbins etc. It also has a small dovetail to mount small bowls.



JS75N Step Jaw Set
 Designed primarily to grip footed bowls in the contracting mode. Provides for optimum grip of three different size foot diameters. Also dovetail mode.

JS-SP35 35mm Spigot Jaws & JS-SP45 45mm Spigot Jaws.
 These two jaws provide a very powerful contracting spigot grip with the SuperNova Chuck. For long unsupported spigot turning applications.

SPUR CENTRE Code: NCSC

This is a rugged 4 pronged spur drive with a 19mm square shank, which fits snugly into the Nova/ SuperNova jaws. Creep of the spur is prevented as the shank is slotted to allow the chuck jaws to close over it. This spur is the answer for turners who use their SuperNova Deluxe almost all of the time but want to be able to do those odd spindle jobs without removing the chuck from the lathe.



INSERT SPANNER Code:23014

Spanner to remove inserts off lathe spindle or from chuck body.

SAFETY

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

Before using the SuperNova Deluxe Sinch Chuck, read and understand this instruction manual. Read and understand also 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. With the SuperNova Deluxe Chuck it is not possible to give exact directions as to the amount of tightening pressure required for workholding. Follow closely strict guidelines in this manual for different jaw types on wood blank diameters and length, plus turning speed.

BEFORE USING SuperNova Deluxe Sinch Chuck MAKE SURE THAT -

•YOU ALWAYS WEAR EYE PROTECTION WHICH COMPLIES WITH CURRENT ANSI STANDARD Z87.1 (USA). WE RECOMMEND THAT A FULL FACE SHIELD BE USED AT ALL TIMES.

•Chuck is properly secured on lathe spindle. Follow mounting instructions for your lathe for 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 COPY TURNER 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 (Following mounting guidelines) and any damage to holding area. Rotate manually to make sure of clearance before switching power on.

•WARNING FOR SAFE OPERATION. DO NOT EXTEND JAW SLIDES BEYOND CHUCK BODY UNDER ANY CIRCUMSTANCES. ONLY OPERATE CHUCK WITH JAW SLIDE STOP SCREW IN PLACE AND TEST TO MAKE SURE IT IS ADJUSTED OUT TO STOP JAW SLIDE. This prevents jaw slides from dislodging from 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 held 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. Whenever 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 jewellery 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 safe distance from the work area.

•Make workshop childproof with padlocks, master switches, or by removing starter keys. When using on DVR3000 lathe, always ensure that the chuck and insert are securely locked before use. This is to prevent the spindle starting in reverse if the reverse button is accidentally pressed.

SuperNova Deluxe 5in Models

There are two models of the SuperNova Deluxe Sinch Chuck designed to meet various woodturning requirements.

COMPANION BODY ONLY MODEL(CODE 13008):

A stripped down version for those who already have either a Nova or SuperNova Chuck. This kit is without the Woodworm screw, any add-on jaws which the woodturner would have as part of their Nova Chuck kit. Comes with a complementary set of jaw screws to mount any Nova or SuperNova Chuck accessory jaws. The SuperNova Deluxe Sinch Chuck is fully compatible with either the Nova or SuperNova Chuck. Companion Body only Accessory Kit: 1x M6 Grubscrew, 2 x Fibre washers, 1 x pinion handle, 8 x M6x10 Jaws screws, SuperNova Deluxe Sinch Chuck Manual.

STANDARD MODEL WITH POWERGRIP JAWS(CODE 13009):

This has a special Powergrip add on jaw set for heavy-duty spigot turning and heavy bowl work. These jaws extend the tremendous gripping power and range of the SuperNova Deluxe Sinch Chuck. Standard Model with PowerGrip Jaws Accessory Kit: 1x M6 Grubscrew, 2 x Fibre washers, 1 x pinion handle, 8 x M6x10 Jaws screws, 1 x Woodworm screw, 1 x Powergrip jaw set, 1 x M4 Allen key, 1 x M3 Allen key, SuperNova Deluxe Sinch Chuck Manual.

EXPLANATION OF TWO OF THE MOST COMMON CHUCKING TECHNIQUES USED IN THIS MANUAL

EXPANDING DOVETAIL OPERATION

Expansion of the jaws into a recess. This function is for bowl and platter turning where the projection (depth) of the wood blank is not too great. Specific sizes for each jaw type is stated in the accessory jaw manual.

When making a recess it is important to calculate the depth. The recess depth is an important consideration for maximising the holding power of the jaws, guidelines under each jaw should be followed closely. The depth of a recess can be varied according to the size and mass of the workpiece. Larger bowls and softer woods require a deeper recess. Smaller lids and thin platters generally require a shallower recess. Always use a recess depth in excess of what is required. IF THERE IS ANY DOUBT INCREASE RECESS DEPTH.

SPIGOT OPERATION

Contraction of the jaws around a wooden spigot for grip. Mainly used for box, goblet and vase turning, that is, endgrain items with a fair degree of overhang. Generally tailstock support is minimal or cannot be used because of the need to hollow out the inside. This method seems to be preferred by many bowl turners over the internal dovetail recess as the tool can later be re-shaped or removed, if desired, to make a smooth outside bottom of the bowl.

This situation is one of the most difficult to provide secure holding no matter what fixing method is used. EXTREME CAUTION WITH THIS OPERATION MUST BE EXERCISED. However if used properly the SuperNova Deluxe Sinch Chuck provides a very secure grip in this mode

FREE END TURNING

Turning where the work is not supported by the tailstock. Check for adequate contact and grip of all four jaws into the wood when using this operation. MAKE SURE YOU HAVE AN ADEQUATE GRIP BEFORE OPERATION by vigorously wrenching the work piece mounted in the chuck, if any loosening occurs DO NOT PROCEED with this operation. Repeat tightening procedure and reset grip. Refer to the Nova Chuck/SuperNova/SuperNova Deluxe Sinch Chuck manual for information on forming a spigot.

OPTIONAL ACCESSORIES

The SuperNova Deluxe Sinch Chuck is one of the most versatile chucking systems. It is fully compatible with the Nova and SuperNova Chucks and shares the same extensive accessory range.

Optional accessories include over 16 different jaw sets and other items to enable you to explore all areas of turning with your SuperNova Deluxe 5in Chuck.

COLE JAW SET Code: JSCOLE

A versatile set designed primarily for rechucking of bowls to remove chuck marks or re-shape the bottoms of the bowls that have already been turned. Most other jaws etc can be mounted on top of the Cole Jaws for a combination jaw facility.

130mm JUMBO JAWS Code: JS130N

The big brother to the 100mm jaws. Designed to handle large work up to 750mm (29") in diameter. An ideal 'companion' jaw to the SuperNova Deluxe 5 inch as the extra power of the SuperNova Sinch matches the big capacity of these jaws. No need to consider larger chucks for those special jobs - the Jumbo Jaws will perform just as well. Has a dovetail recess facility up to 149mm (5.86").

POWERGRIP JAWS Code: PJSN

These jaws have tremendous holding power. Best used in conjunction with the SuperNova Deluxe Sinch, as the extra gripping power of the chuck enhances the PowerGrip's action. This jaw is included with the standard SuperNova Deluxe model. Able to hold large work up to 750mm (29") in diameter but has the added advantage over the 130mm jaws, of being able to hold long spigots up to 19" long. Also has a dovetail facility with up to 120mm (5") recess.

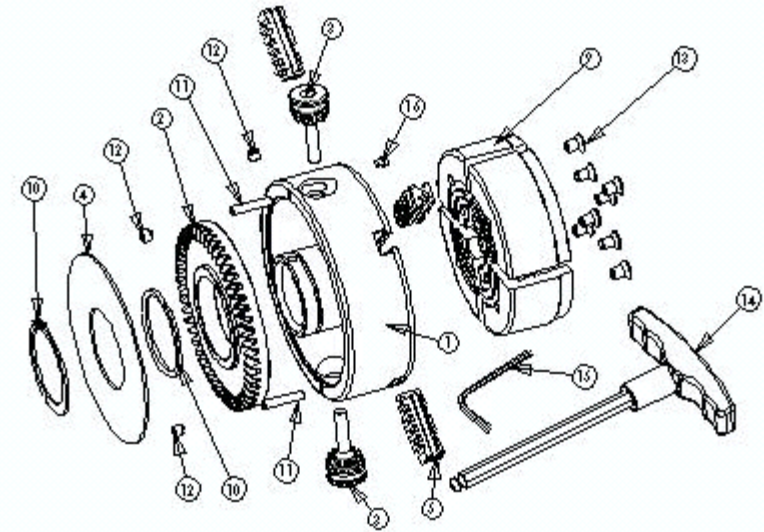
JS100N 100mm Jaw Set

Have an expanding dovetail grip, strong reverse dovetail grip for footed bowls. Made for a larger range of work than either the 50mm or Step jaws.



TROUBLE SHOOTING GUIDE

FAULT	REMEDY
1. Insert jams when partially threaded into body	Check insert thread and chuck body threads are free from damage. Check insert has engaged with chuck body thread correctly. See 'Fitting to Chuck' Page 7. Make sure the grub screw has not been SCREWED IN.
2. Chuck body appears not to be true	Check insert is properly home in chuck body. Check that the insert is correctly screwed onto lathe spindle. Insert must back against accurate face/register or bearing on lathe spindle. See Page 7.
3. Add on jaws do not run true	Check jaws are mounted correctly on jaw slides. For method see Page 9. For accuracy parameters see Page 2. When the jaws are expanded beyond a 50mm circle they will appear to be running out but in fact are maintaining concentricity. Always evaluate runout from turned wood clamped in jaws
4. Jaw Slides closed to centre and No. 1 slide stays in centre when jaws are expanded again	Jaw Slide(s) have overtravelled from scroll. It will be necessary to tap back No 1 jaw slide until it has re-engaged. See page 8 for 'insertion of jaw slide'.
5. Chuck very stiff to operate or jammed	Wood dust and shavings can clog the chuck in use. The chuck should be cleaned. Follow instruction Page 7
6. Jaw Slides when wound to centre do not meet	Slides have not engaged sequentially in clockwise order with scroll - 1-2-3-4. Jaw Slides could have been inserted out of order. Check insertion procedure Page 8.
7. When chuck is being removed from spindle the body unwinds from insert	Either lock insert in body using grub screw and fibre washer provided or use spanner on the insert to wind chuck off lathe.
8. Chuck jams on lathe spindle	This is a common problem with fixtures on a lathe. Use piece of wood & knock against base of pinion gear in anticlockwise direction to jar loose from spindle. To help prevent it try a plastic or fibre washer between insert/chuck and spigot shoulder of a spindle. Use of washer could affect accuracy.
9. Woodworm screw creeps forward or is not seated properly in chuck	Make sure woodworm screw boss is placed correctly between jaw slides and behind jaws. See Page 9
10. Wooden spigot shifts during turning	Check that the spigot area is made correctly for jaws to grip. Check that the spigot is not oversize. See spigot operation instruction Page 11. Use careful chisel techniques that do not exert too much pressure. Irregular rough wood blanks need to be checked to see whether there is enough jaw contact.
11. Wood blank does not seat properly in internal dovetail mounting	Check the angle of the dovetail recess made is the same angle as the jaws. Make sure the bottom of the recess is flat and square to face. See dovetail operation Page 10. Check that the bowl is not incorrectly riding on the flat shoulder of jaws behind the dovetail.



Code	Qty	Part No	Description
1	1	13000	Supernova Deluxe Body
2	1	13001	Deluxe geared ring
3	2	13002	Deluxe Pinion
4	1	13003	Deluxe backing plate
5	1	7000	Jawslide
9	4	PJSN	Power Grip Jaws
10	2	EC48	Circlip dia 48mm external
11	2	55038	Dowel Pin 5mm
12	3	G0606	6mm grub screw
13	8	CM5010180	Special head M6x10 countersunk screws
14	1	13006	8mm Hexagon Wrench
15	1	AK3	Allen Key 3mm
16	1	LSM4N	Stopper Screw

Extra Support is available on our Website!
Go to www.teknatool.com
or email: service@teknatool.com

MOUNTING CHUCK ON LATHE

There are two versions of the SuperNova Deluxe 5in Chuck: an Insert version for all threads up to 28mm (1 1/8") and threaded versions for larger dedicated threads up to 38mm (1 1/2").

CORRECT MOUNTING OF CHUCK TO INSERT (WITH INSERT VERSION) AND LATHE SPINDLE IS VERY IMPORTANT TO ACHIEVE ACCURACY.

INSERT VERSION: Check that the correct insert has been supplied to match your lathe spindle thread. The code of the insert is on a label on the plastic insert cover and stamped on one of the flats of the hexagon section of the insert. A list of thread sizes that can be fitted with an insert plus the larger dedicated threads is provided. If you find your lathe thread is not listed, check with your supplier to see if there have been more recent additions to the thread range. Failing that, you may have a blank insert or blank chuck machined to your requirements at your own expense.

WE STRONGLY RECOMMEND THAT THE CHUCK IS NOT USED ON LATHE SPINDLES UNDER 1in (25mm) diameter.

Threads covered by the Insert System (Threads up to 28mm (1 1/8"))	
Chuck	Code
Insert 2	(I2NS)
Insert 3	(I3NS)
Insert 6	(I6NS)
Insert 7	(I7NS)
Insert 8	(I8NS)
Insert 9	(I9NS)
Major	
Insert A	(IANS)
Insert B	(IBNS)
Insert C	(ICNS)
Insert D	(IDNS)
Insert E	(IENS)
Insert F	(IFNS)
Insert H	(IHNS)
Insert I	(IINS)
Insert J	(IJNS)
Insert K	(IKNS)
Insert L	(ILNS)
Insert M	(IMNS)
Insert N	(INNS)
Insert O	(IONS)
Insert Q	(IQNS)
Insert U	(IUNS)
Insert V	(IVNS)
Insert W	(IWNS)
Insert Y	(IYNS)
Thread Direct to Chuck	
4 Chuck	(SNCA)
P Chuck	(SNCP)
R Chuck	(SNCR)

: M3x3.5 Rh Nova DVR3000 Europe
: 1/2" BSW Rh Tamer Union Graduate Wackin Bursgreen
: Blank For threads up to 38mm

: 1 1/8"12 TPI Rh UNF Taiwanese
: 7/8" 14 TPI NF Rh
: M25x2 TPI Rh Tyme Avon
: 1 1/4" 8 TPI UNS RhTektatool/DVR30003000
(USA) Woodfast USA

: 3/4" 14TPI Rh BSP Tektatool (Pre 1986)
: 3/4" 14TPI Lh BSP Tektatool (Pre 1986)
: 1" 10 TPI Rh BSF Tektatool Woodfast Durden
: 1" 8 TPI Rh UNC General Rockwell Delia Golding
: 1"12TPI Rh Myford MLS
: 5/8" Plain Bore Shopsmith
: 3/4" 10TPI Rh BSW Rockwell Homcraft
: M24x3 TPI Rh B Line Arundel K600 K450
: 1 1/8"12TPI Rh Myford Mystro
: 1 1/4" 8TPI UNS RH: Tektatool DVR3000 Only
: M18x2.5 Rh ELU DB180

: 1" 10 TPI Lh BSF Tektatool Woodfast Durden
: Blank Can be threaded up to 28mm (1 1/8")
: 1 1/8" 7 TPI BSW Rh Morton
: M30x3.5 Rh Tektatool Nova 3000/Comet/TL1500
Woodfast, Vicmarc

: 1 1/8"12 TPI Rh UNF Taiwanese
: 7/8" 14 TPI NF Rh
: M25x2 TPI Rh Tyme Avon
: 1 1/4" 8 TPI UNS RhTektatool/DVR30003000
(USA) Woodfast USA

Before scraping out the recess, slightly hollow out the centre of the bowl blank with a bowl gouge or round nose scraper. The purpose is to relieve the centre so that when the recess is scraped out only half the chisel edge needs to be used. We recommend this to reduce tearing of the wood by scraping action, and to make the recess a little more finished to give a better effect to the overall bowl. Extra embellishments can also be made to the recess to enhance the bowl.

After the recess is finished and the outside of the bowl is turned to shape, wind bowl back off screw. Bowl blank is now ready to be reversed into the jaws. Expand the jaws into the recess. When the jaws are expanded out into the recess, screw the wood blank gently back and forth to make sure it is seated properly on the bottom face of the jaws.

WARNING: MAKE SURE THE JAWS ARE SEATED PROPERLY IN THE RECESS AND THAT THE BOWL IS NOT INCORRECTLY RIDING ON THE FLAT SHOULDER SECTION OF THE JAWS BEHIND THE DOVETAIL. THIS COULD LEAD TO THE BOWL DISLODGING FROM CHUCK. LOOSEN JAWS AND REMOUNT CORRECTLY.

Now give a few gentle raps with the end of a chisel handle or wooden mallet around centre of bowl. Use pinion handle to give give an extra nip up. Refer to chuck operation Page 4. Refer again to safety before operation.

SPIGOT OPERATION

This is where the jaws contract around a wooden spigot for grip. This function is mainly for box, goblet and vase turning, that is, endgrain items with a fair degree of overhang.

This situation is one of the most difficult to provide secure holding no matter what fixing method is used. **EXTREME CAUTION WITH THIS OPERATION MUST BE EXERCISED. DO NOT EXCEED 700 RPM FOR THIS OPERATION.** If used properly the SuperNova Deluxe Chuck however, provides a very powerful and secure grip in this mode.

Instructions below apply to the Powergrip jaws but the general spigot technique is the same for other jaw types. However, maximum turning speed and recess size varies with different jaw types. Consult accessory jaw manual or instruction sheets.

With the power grip jaws a maximum size woodblank of 200mm (8 inches) diameter (NOT spigot size) by 310mm (12 inches) length can be turned. Square timber of same length and between 60mm (2 3/16 inches) to 80mm (3 1/8 inches) and grip of all four jaws into wood.

MAKE SURE YOU HAVE AN ADEQUATE GRIP BEFORE OPERATION by vigorously wrenching the limb mounted on chuck. If any loosening occurs **DO NOT PROCEED** with operation. Repeat tightening procedure and re-test grip.

SPIGOT SIZE:

Powergrip jaws will grip a round spigot between 80mm (3 15 inches) to 100mm (4 inches) approx. Square timber between 60mm (2 3/16 inches) to 80mm (3 1/8 inches) square approx.

(Note: EUROPE/UK: Maximum size is 6mm (1/4") less).

Jaw slides only: With the add-on jaws removed, the jaw slides will grip either round or square timber down to 8mm (5/16 inch). Length limits same for spigot work. Small work not greater than this diameter can be turned at a speed NOT EXCEEDING 1800 RPM. Larger work held in the jaw slides should not exceed 700 RPM.

FORMING SPIGOT:

When selecting wood make sure it is sound without splits or weakness - especially around the area where the spigot is to be formed. **REMEMBER WITH FREE END TURNING, THIS IS THE ONLY AREA GRIP. IF ANY WEAKNESS IS FOUND, DO NOT PROCEED.** Mount wood between centres and turn the spigot area. Make the spigot as parallel as possible to maximise the efficiency of the clamping action. Only approximate sizing of the spigot is necessary, as the jaws will accommodate a wide range of spigot diameters within the spigot limits stated above.

PREPARATION: The 10.5mm thread requires a drilled hole about 8mm (5/16") in diameter. The screw has considerable holding power and it is sometimes difficult to unscrew, so wax or oil the thread before mounting the wood.

CARE: The threads are fine and can be damaged by mishandling. DON'T hammer into wood! DO screw into a pre-drilled hole. Any nicks on the threads can be removed by carefully filing.

DOVETAIL OPERATION

Expansion of the jaws into a recess. This function is for bowl and platter turning where the projection (depth) of the wood blank is not too great i.e. up to 150mm (6 inches). Characteristically these items have a parallel wood grain. IT MUST NOT BE USED FOR ANY LONG WORK (OVER 150MM) AS THERE WOULD BE GREAT DANGER OF WOOD TEARING OUT AND DISLODGING FROM CHUCK.

Instructions below apply to the Powergrip jaws but the general technique is the same with other accessory jaws. However the maximum size of wood blank that can be mounted, the maximum turning speed and recess size varies with the different accessory jaws. Consult specific instructions included for each jaw set.

This strong holding method, using the power grip jaws, bowls up to 400mm (16 inches) in diameter can be turned. DO NOT EXCEED 700RPM WITH THIS OPERATION. OUT OF BALANCE STOCK MUST BE TURNED AT THE SLOWEST SPEED POSSIBLE.

Powergrip jaws: Any recess can be turned between 96mm (3 49/64 inches) and 120mm (4 45/64 inches) diameter.

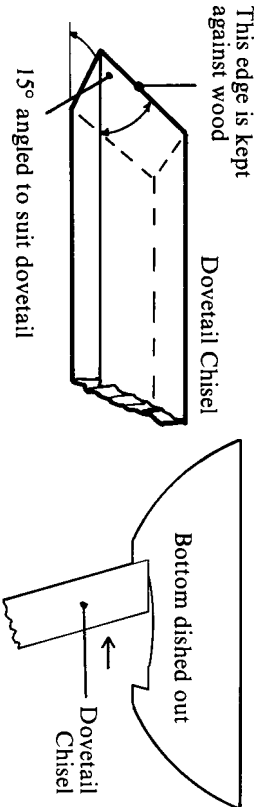
EUROPE/UK: Maximum recess size is 8mm (0.30").

Choose the diameter that suits your bowl design. However the optimum turning recess diameter (on the outside) is 99mm (3 57/64"). As the recess diameter is increased above 99 mm, less jaw contact is made. This needs to be kept in mind when considering the recess depth and size of wood blank being mounted. Increase the recess depth to maximum if a recess diameter in excess of 99mm is used. The dovetail angle is 15 degrees.

FORMING RECESS

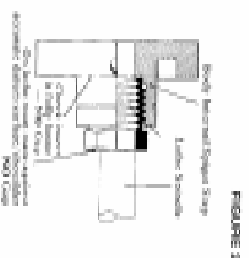
The jaw dovetail has been designed for use with a standard skew scraper. This chisel will make a recess to the angle required. FOR SAFETY REASONS WE STRONGLY ADVISE AGAINST USING ANY OTHER TOOL. A profile of this chisel is shown below. It is best to work with a tool, which is already ground, to the correct angle. All that is necessary then is to keep the leading edge of the chisel flat on the wood, moving forward and out to form the recess to the required diameter and depth.

Mount bowl blank on screw as described in previous section. It may be convenient to first mark out with a pencil, a circle on the bowl blank. To mark out the recess diameter with pencil, hold pencil point to desired radius, supported on the toolrest. Then revolve blank by hand thus creating a pencilled circle. However, as specified above, any recess diameter can be made between 50mm (2 inches) - 75mm (3 inches) (standard 50mm jaws) so exact sizing of the recess is unnecessary.



FITTING TO CHUCK: Check that the internal spigot of chuck body plus insert threads are clean and that the spigot end of the insert is free from damage. Any dents or nicks must be carefully filed off so the insert can be fully screwed home in chuck body. Refer to fig 2 on right side.

The tolerances of the chuck body and insert are a tight fit to ensure accuracy. This means that the insert may be difficult at first to engage with the chuck body thread. One way is to grip the chuck body in a vice (pad against damage) and screw in insert using the optional accessory spanner or a 1 1/2" AF spanner. Care needs to be taken that the outer male insert thread is engaged properly at the start with the female body thread. Screw insert fully into body recess. This is important to ensure good running.



CHUCK INSERT SPANNER An optional, accessory insert spanner can be purchased to help wind the inserts into the chuck or remove from the lathe spindle. (Code 23014).

Insert can now be locked to chuck body by means of the M6x6 grub screw provided. Make sure that the fibre washer is inserted first to act as a buffer between the grub screw and insert thread. DO NOT SCREW IN GRUBSCREW BEFORE INSERT IS SCREWED HOME IN CHUCK.

IMPORTANT: LH THREAD INSERTS MUST BE LOCKED TO CHUCK BODY OR CHUCK BODY COULD UNWIND FROM INSERT WHILE RUNNING.

FITTING CHUCK TO LATHE: Correct fitting of chuck to lathe spindle is important to ensure accuracy. The chuck body must contact an accurate shoulder on the lathe spindle or bearings (as on Teknatool Nova 3000) to ensure chuck will run true.

There can be a wide variety of lathe spindle thread and spigot dimensions even within the same thread size. The internal thread size is kept to standard tolerances. The internal thread length and spigots of SuperNova inserts are manufactured to cover as wide a range of variations as possible. This will mean that in most situations you should be able to get a satisfactory match.

CHECK THE FOLLOWING:

Although the insert may screw on part way it may not contact properly with spindle spigot - a spacer or some further modification of the insert may be necessary. This would be the responsibility of the chuck user. Make sure the chuck is screwed to lathe thread properly - a good check is to see whether it screws home on the spindle same as any another lathe fixture such as a faceplate. POOR FIT OF CHUCK TO LATHE SPINDLE CREATES A SERIOUS HAZARD WHERE CHUCK COULD DISLODGE FROM LATHE. DO NOT ATTEMPT TO USE CHUCK UNLESS THE CHUCK IS CORRECTLY FITTED TO LATHE SPINDLE.

MAINTENANCE

CLEANING CHUCK: The SuperNova Deluxe Chuck is perfectly enclosed from behind which makes the gearing mechanism maintenance free over a long period of time. However, the chuck needs to be inspected periodically for build up of wood dust in the jaw slide area on the front side. Wood dust build up can make the jaws difficult to move. To clean out the wood dust build up, the following method can be used. Remove Jaw Slides. (First removing stop screw as explained in previous section) then using a piece of wood (matchstick size) insert in the bottom of scroll and rotate scroll ring. This will scrape out the accumulated wood dust.

To disassemble chuck: Over a long period of usage there could be some accumulation of very fine dust in the gearing area behind which may require dismantling of chuck for a full clean. Following are steps: (Refer to exploded chuck diagram, Page 5) Using expanding plier remove the circlip securing the backing plate. This should give enough access to clean the gears without further dismantling of the chuck. If you want to dismantle further, follow these instructions: Remove the two M6 grub screws holding the dowel pins. Next hold the chuck with the jaws/ slide surface facing up. Wiggle the pinions with the help of M8 allen key till the two dowel pins have fallen down. Next remove the pinions. Remove the second circlip securing the scroll ring. The scroll ring can be removed now. After you cleaned the chuck assemble the chuck back in the same order. Re-insert the jaws/ slides. Remember, after you have re-assembled the gears, apply any general grease all around the gear area!
Remember to replace jaw travel stop screw!!

STOP ON JAW TRAVEL

Stop screw is located at the end of the number 1 slideway, or number 3 for Europe. In the body section of the chuck. The stop on No.3 slideway for Europe is to conform to CE regulations to limit the travel of the jaw slides to the diameter of the chuck body. The screw prevents jaw slides being unwound from the chuck. Do not exert pressure against the screw with pinion action. If screw is removed for disassembly it must be replaced before use. Refer exploded view diagram on page 5 of the manual, and to drawing accompanying insertion of jaw slides below.

Caution: Do not close jaw slides to a diameter less than 8mm (5/16") for workholding. Do not close jaw slides to fully closed position because jaw slides could over travel on scroll and become disengaged.

INSERTION OF JAW SLIDES

Jaw slides are numbered 1 - 4 (numbering on end of slide). (Note: Travel stop screw at the end of No. 1 body slide needs to be removed. Refer to previous jaw slide travel lock section). When the jaws are removed from the body they need to be reset in sequence. To reset jaws in chuck body, rotate with pinion gear until the lead of the scroll (like a thin wedge) appears in the opening of the slide way with '1' marked beside it.

CAUTION: IT IS IMPORTANT TO ROTATE THE LEADING EDGE OF THE SCROLL BACK SLIGHTLY TO CLEAR THE SLIDEWAY BEFORE SLIDE CAN BE INSERTED. FAILURE TO ROTATE THE SCROLL BACK COULD RESULT IN DAMAGE TO SCROLL.

Now insert No. 1 slide into slideway and rotate scroll in a clockwise direction (chuck facing you) until the lead of the scroll appears at the next slideway. Now engage No.2 scroll in the same manner as No. 1. Proceed in the same way in a clock-wise sequence with No.3 and No.4 slides. Refer to the diagram.

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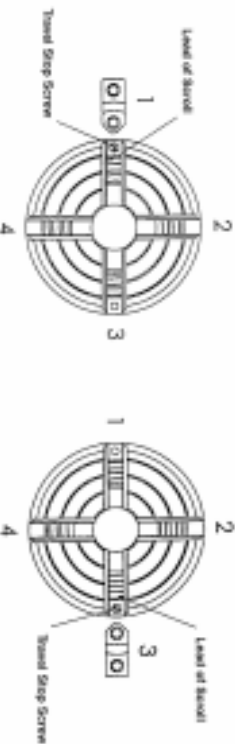


FIGURE 3

FOR EUROPE ONLY

FIGURE 4

MOUNTING ADD-ON JAWS

Your standard SuperNova Deluxe 5in chuck is provided with PowerGrip add-on jaws. They need to be located and screwed on to the jaw slides of the chuck. The same procedure outlined below must be followed for all accessory jaws as well.

IT IS IMPORTANT TO LOCATE JAWS PROPERLY IN THE JAW SLIDES FOR THE CHUCK TO FUNCTION ACCURATELY.



FIGURE 5

Follow the method set out below -

1. You will notice that the back of the jaws have a stepped location ring. This location ring is designed to fit into the grooved section of the jaw slide for precision location. Ensure that the slide and collet back are clean and free from any burrs or damage that might affect location. Place the jaw segment over the hole positions on the jaw. Press the jaw segment firmly onto the jaw slide. For the first few times you may need to GENTLY tap the jaws into the locator slot with a block of wood.
2. The screws can now be screwed in, using the 4mm Allen Key provided. Lightly grease or oil screws under each head and on the threads before use to prevent the screws from seizing in the jaw. Preferably use an anti-seize compound e.g. ROCOL J 166 Anti-Size Compound. Do all screws up finger tight and then back them off one quarter to half a turn.
3. Wind the mounted jaws into the centre of the chuck until they all butt against the other. Now finally tighten screws, starting with centre screws and then outside screws. Nip screws up firmly but DO NOT OVERTIGHTEN.
4. Check there is no light between jaw slides and add on jaw segments or that one or more segments is not higher or lower than the rest. If this is the case repeat procedure above.

OPERATING MODES

SCREW CHUCK: This is a convenient mounting method. The woodworm screw is purpose-designed for screw chucking. It is a cylindrical screw which maintains its full holding power along the whole length, unlike normal tapered screws. The thin thread form is specially designed to cause minimum damage to wood fibres. They grip better than screws with thicker threads because there is a larger volume of undamaged wood retained within the screw. The woodworm screw is made complete with the boss section in one piece. The woodworm screw is designed to be used with the 50mm jaws remaining in place on the chuck. This facility is very convenient for remounting work directly onto the jaws after the screw is removed. To convert to this operation, place the boss section into the centre of the chuck making sure flat shanks are aligned to the jaw slides and close jaws around it. BEFORE FINAL TIGHTENING MAKE SURE THAT THE FRONT OF THE BOSS SECTION OF THE SCREW IS SEATED BEHIND AND AGAINST THE 50mm JAWS. This will prevent any tendency for the boss section to creep forward when the screw is being used. The front face of the 50mm jaws has been machined to provide an accurate backing surface. This is quite an advantage, providing a much tighter fit and better tolerance for irregular face stock. This feature is also quite an advantage when using the screw to mount a bowl for first stage bowl turning - forming the outside of the bowl straight onto the jaws (the screw is first removed) after the recess has been formed.

SCREW DEPTH: The screw provides 19mm (3/4 inch) of thread beyond the 50mm jaws. With all wood blocks over 150mm (6 inches) in diameter the full thread depth of 19mm should be used. Irregular, rough tree blanks (e.g. small sections of tree limbs) not exceeding the above sizes can be held quite firmly BUT caution must be exercised. Check for adequate contact.

CAPACITY: DO NOT USE THE SCREW FOR VERY LARGE WOOD BLANKS. Its use is intended for small bowl and screw chucking work. The maximum capacity which should be mounted on the screw - 250mm (10 inches) diameter x 100mm (4 inches). DO NOT EXCEED 600 RPM FOR THIS OPERATION. Use tallstock support.

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