

KLINGSPOR'S WOODWORKING SHOP

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Question: *I want to order a Nova Chuck and I was asked what spindle thread was on my lathe. Why do I need to know this and how can I work out what the thread size is?*

Answer:

There are many lathes on the market, and many have different thread sizes on the headstock spindle. In order to ensure that your SuperNova or Nova chuck fits accurately and safely onto your lathe, we need to know what thread the lathe spindle is so that we can make an exact match. Teknatool sales and service staff are generally familiar with most common/popular lathes on the market. If you tell them what your lathe make & model is, chances are that they will immediately be able to match it for you.



This threaded part is the lathe headstock spindle. It is this part the chuck must thread onto.

Where you are not in contact with a Teknatool Sales representative immediately, or in the unlikely event that they have not heard of your lathe and are unable to assist, you might need to use this D.I.Y sheet to determine your lathe's spindle thread. Luckily, determining your lathe spindle thread for most people is a fairly quick and painless exercise, seldom going past Step One in our procedure.

Getting Ready

Parts required :None

Tools Required: 1 x Vernier or measuring tool (for Step Five only), Pen for notes.

Before you start, it can be helpful to gather any information that you may have on your lathe - your sales literature, manual, etc.

Step One
Refer to the Thread Listing Guide on pages 4 & 5. Is your lathe (including model) mentioned?

YES

If listed, make a note of the code beside the listing here: _____

This is what you will need to advise your Teknatool Sales Representative., in order for you to get the right chuck or chuck insert/adaptor to fit your lathe.

You do not need to do anything else on this self help sheet.

NO

Do you have your lathe's manual or sales literature?

YES

Step Two

Firstly research your lathe manuals and pamphlet material. A good manufacturer should list the thread size clearly either in the lathe manual or in the pamphlet, preferably both.

Machine Make: _____

Machine Model: _____

Thread Size if Known: _____

Inboard thread? (ie Right-hand) or Outboard thread?(ie Left-hand) Or Both?

NO

Step Three

If you don't have a manual, contact your supplier. You should always have a comprehensive operating manual, for safety's sake if no other!

While you are talking to them, ask them about your lathe spindle size. If they can tell you, note it here: _____

Repeat Step One.

If you don't the information from the manufacturer, follow steps Outlined in the measuring.

Step Four

Taking the information obtained from your research, refer to the Teknatool Lathe thread listing on pages 4 & 5 of this self-help sheet.

Can you find a match?

YES

If so, make a note of the Insert/Chuck Code that it matches here _____.

This is the insert/chuck you need to match your lathe headstock spindle. The Teknatool sales person will need this information in order to match you with the correct chuck or chuck insert/adaptor.

You do not need to do anything further on this self help sheet.

NO

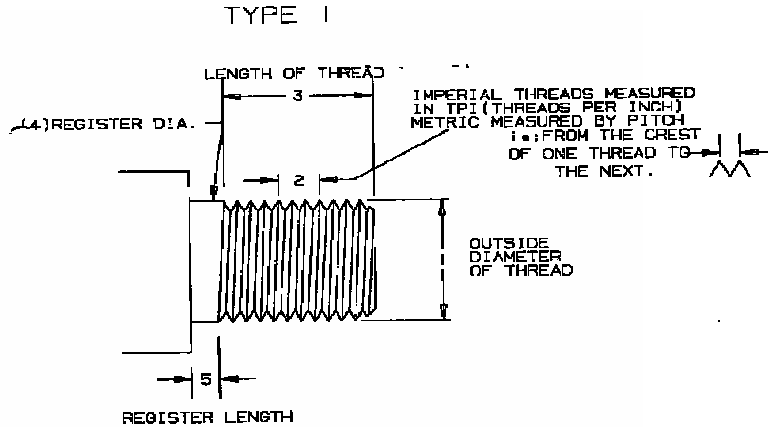
Where you have reliable information your lathe thread size, but there is no match on the listing, you may have an unusual lathe that is not covered by Teknatool's thread listing. You will need to either purchase a blank chuck, or a blank insert/adaptor and get it threaded to you requirements. See thread guide for details.

Where you don't have information on your lathe spindle and can't get it. You will need to obtain some measurements of your lathe spindle. See Step Five.

Step Five

Do this step only if you have been unable to locate your spindle thread information in the thread listing guide, your lathe manual, or by asking the manufacturer!

Refer to the Diagram to Assist with the measurements required.



Measuring accurately is important. It is important to establish whether it is a metric or imperial thread ie 25.4mm corresponds to 1", but 25mm is a metric thread size.

Step	Area/Quality to be Measured	Record Measurement Here
1.	Outside diameter of thread	
2.	Pitch of thread	
3.	Length of thread	
4.	Register diameter	
5.	Register Length	

Determine thread form angle
 UNC, UNF and Metric Threads are a 60° angle
 Whitworth, BSW, BSF are a 55° angle

Have you been able to measure and determine your lathe thread size?

YES

Congratulations! You have determined your lathe size..
 Record the code of the insert/chuck on the listing Here: _____
 You will now need to match that against the thread listing on pages 4&5. Repeat Step One.

NO

Ok, don't worry! There are a number of things you can do:
 1. Contact your lathe manufacturer and obtain the information
 2. Take a faceplate or some other threaded fitting along to your local engineering company. They should be able to quickly measure it for you and assist in matching the correct chuck adaptor/insert or chuck on the thread guide.

Yes, but when checking against the thread guide on pgs 4&5, it does'nt match anything on the list.

It could be that you have an unusual lathe that is not available as a standard thread. You might need to get either a blank chuck or a blank insert/adaptor and get a local engineering company to thread it out to your exact requirements. Or, try getting your local engineering company to measure it for you, and re-check the list.

TEKNATOOL CHUCK INSERT AND DIRECT THREAD SYSTEM

The Teknatool SuperNova, SuperNova Deluxe and Nova Chucks have the widest range of lathe compatibility on the market.

If you have a known lathe model, it is highly likely that we have a chuck or insert/adaptor to fit it. If we don't, then we have either a blank body chuck or a blank insert, which you can have threaded out to your requirements. To check if we can match your lathe, refer to the tables below.

The first refers to the list of insert/adaptors that we manufacture. Check with us if your lathe is not listed, we update our inserts all the time. The second table refers to the thread sizes which we direct thread into the chuck body - as such, these do not require insert/adaptors. A directly threaded chuck body cannot be altered to a insert type body or another thread size once threaded, so it pays to be sure that your lathe thread size is not covered by the insert/adaptors first!

Note that all insert/adaptors are fully compatible between the SuperNova, SuperNova Deluxe and Nova Chucks, and that all thread sizes listed here are available for both chucks.



Picture of a Teknatool Chuck Insert.

Insert/Adaptor Listing for SuperNova, SuperNova Deluxe & Nova Chucks

For threads under 28mm - if you change your lathe, you don't have to change your chuck! All you have to do is unwind your insert/adaptor, and put in a new insert/adaptor.



Above Left: Fitting the insert/adaptor to the chuck.
Above Right : The Insert/Adaptor fitted.

Code	Description	Thread Size	Lathe Match (where known)
12NS	INSERT 2	M20x2 RH (Metric)	Tyme Cub
13NS	INSERT 3	M20x1.5 RH (Metric)	Electra Beckum / Multico Sumaro
16NS	INSERT 6	3/4" Plain Bore	
17NS	INSERT 7	1 1/8" 8 TPI UN	(NOT UNC)
18NS	INSERT 8	7/8" 12 NS LH	
19NS	INSERT 9	3/4" 16 TPI RH with 6mm register	
1ANS	INSERT A	3/4" 14TPI BSP RH	Teknatool TL1000 (Pre 1986)
1BNS	INSERT B	3/4" 14TPI BSP LH	Teknatool TL1000 (Pre 1986)
1CNS	INSERT C	1" 10TPI BSF RH	Teknatool TL1000 Woodfast Durden
1DNS	INSERT D	1" 8TPI UNC RH	Delta Rockwell Golding General Teknatool Comet (North America) & Mercury Lathes
1ENS	INSERT E	1" 12TPI RH	Myford ML8, Turnstyler

Continued

Code	Description	Thread Size	Lathe Match (where known)
IFNS	INSERT F	5/8" Plain Bore RH	Shopsmith
IHNS	INSERT H	3/4"10TPI BSW RH	Rockwell / Homecraft
IINS	INSERT I	M24x3 RH (Metric)	B Line Arundel K600/K450
IJNS	INSERT J	1 1/8"12 TPI RH	Myford Mystro, Masterlathe (NZ)
IKNS	INSERT K	M18x2.5 RH (Metric)	Elu DB 180
ILNS	INSERT L	1 1/4"8 TPI RH	FOR NOVA DVR 3000 LATHES ONLY
IMNS	INSERT M	1"10TPI BSF LH	Teknatool TL1000 Woodfast / Durden
INNS	INSERT N	Blank. Can be threaded up to 28mm (1 1/8") to match your lathe size	<i>Once threaded, this blank adaptor cannot be re-threaded.</i>
IONS	INSERT O	1 1/8" 7 TPI BSW RH	Morton
IQNS	INSERT Q	M30x3.5 RH (Metric)	Teknatool TL1500/3000/Comet (European & Southern Hemisphere) Woodfast
ITNS	INSERT T	1"8 TPI Dual Threaded LH and RH	Teknatool Nova Mercury Mini Lathe Jet
IUNS	INSERT U	1 1/8" 12 TPI UNF RH	Taiwanese
IVNS	INSERT V	7/8"14 TPI NF RH	
IYNS	INSERT Y	1 1/4" UNS 8 TPI RH	Teknatool TL1500/3000/Comet (North America)
IWNS	INSERT W	M25x2 RH (Metric)	Tyme Avon

**Thread Sizes Available directly threaded into chuck body
(for SuperNova, SuperNova Deluxe & Nova Chucks)**

For thread sizes over 28mm - note that as these are threaded straight into the chuck body, these cannot be altered to another thread size or to take an adaptor/insert once purchased. Not all Teknatool Chucks are available in all direct thread options. Check with your reseller or with us for the most up to date information.



SuperNova Chuck thread direct into the body (no adaptor/insert)

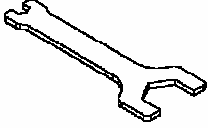
Code	Description	Thread Size	Lathe Match (where known)
NSB4	Chuck 4	M33x3.5 RH (Metric)	Scheppach DMV200 & DMT180; Sorby (some markets); OneWay 2036/2436/2016/2416; Wivamac (DB & ADB - all models); Kity; Konig; Hager; Hegner; Flott BD180; Emco DB5, VicMarc VL200 & 300 (not US), APTC Woodfast
NSB5	Chuck 5	3/4"16 TPI UNF 1/8" Spigot	Carba Tec
NSBD	Chuck D	1"8 TPI UNC RH	Delta
NSBP	Chuck P	1 1/2" 6 BSW RH/LH COMBINATION THREAD	Union Graduate Wadkin Burgsreen Tanner
NSBR	Chuck R	Blank. Can be threaded up to 38mm (1 1/2") in diameter and 35mm in depth.	<i>Once threaded, this blank chuck cannot be re-threaded</i>
NSBX	Chuck X	1 1/2"8 TPI NF	Conover

Hints from removing insert/adaptors from lathe

After some time, the direct metal on metal contact between the lathe spindle face and the insert/adaptor can mean the insert/adaptors are hard to remove easily with the hand.

To counter this direct friction effect, there are a number of ways to assist in removing the insert/adaptors:

1. Use a fibre washer (similar to those used on taps/washing machines etc) between the chuck insert and the face of the lathe spindle. This breaks the metal to metal contact.
2. Use a 1 1/2" AF Hex Spanner on the hexagonal boss of the insert/adaptor.
3. Purchase a Teknatool Accessory Spanner. This is a double-ended spanner, which can be used on one end to remove inserts, and the other end is sized to fit our Comet lathe and Ornamental Turner fittings.



This spanner is available from where ever the Teknatool Nova and SuperNova chucks are sold, or through our website.



Glossary of Terms

UNC - Unified National Coarse Standard - USA Imperial

UNF - Unified National Fine Standard - USA Imperial

BSW - British Standard Whitworth

A Whitworth Spindle can fit a UNC threaded insert, but a UNC threaded Spindle cannot fit a Whitworth Threaded Inset

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Imperial (Inch)

(For item number TE00131)

Jaw Set & Chuck Suitability		Expanding Action Specifications		Contracting Action Specifications			
Jaw Set	Suitable Chuck			Square Stock		Spigot Mode	
		Min	Max	Min	Max	Min	Max
POWERGRIP JAW	Precision Midi*	Not Recommended		Not Recommended		Not Recommended	
	Nova G3	Not Recommended		Not Recommended		Not Recommended	
	SuperNova2	3.74	4.567	2.165	2.992	3.031	3.858
	Titan	3.74	4.961	2.165	3.386	3.031	4.252

(For item numbers TE00035 & TE00045)

Jaw Set & Chuck Suitability		Expanding Action Specifications		Contracting Action Specifications			
Jaw Set	Suitable Chuck			Square Stock		Spigot Mode	
		Min	Max	Min	Max	Min	Max
35mm SPIGOT JAW	Precision Midi*	2.047	2.402	0.984	1.378	1.22	1.575
	Nova G3	2.047	2.835	0.984	1.772	1.22	1.969
	SuperNova2	2.047	2.835	0.984	1.772	1.22	1.969
	Titan	2.047	3.268	0.984	2.165	1.22	2.362
45mm SPIGOT JAW	Precision Midi*	2.047	2.402	1.22	1.575	1.614	1.969
	Nova G3	2.047	2.835	1.22	2.008	1.614	2.402
	SuperNova2	2.047	2.835	1.22	2.008	1.614	2.402
	Titan	2.047	3.228	1.22	2.402	1.614	2.795

(For item number TE06014)

Jaw Set & Chuck Suitability		Expanding Action Specifications		Contracting Action Specifications			
Jaw Set	Suitable Chuck			Square Stock		Spigot Mode	
		Min	Max	Min	Max	Min	Max
75mm BOWL JAW	Precision Midi*	Not Recommended		Not Recommended		Not Recommended	
	Nova G3**	3.189	4.016	1.339	2.165	1.831	2.657
	SuperNova2	3.189	4.016	1.339	2.165	1.831	2.657
	Titan	3.189	4.409	1.339	2.48	1.831	3.051

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(For item number TE00050)

Jaw Set & Chuck Suitability		Expanding Action Specifications		Contracting Action Specifications			
Jaw Set	Suitable Chuck			Square Stock		Spigot Mode	
		Min	Max	Min	Max	Min	Max
50mm JAW	Precision Midi*	2.008	2.402	1.22	1.614	1.654	2.047
	Nova G3	2.008	2.835	1.22	2.047	1.654	2.52
	SuperNova2	2.008	2.835	1.22	2.047	1.654	2.52
	Titan	2.008	3.228	1.22	2.441	1.654	2.874

(For item number TE00100)

Jaw Set & Chuck Suitability		Expanding Action Specifications		Contracting Action Specifications			
Jaw Set	Suitable Chuck			Square Stock		Spigot Mode	
		Min	Max	Min	Max	Min	Max
100mm JAW	Precision Midi*	Not Recommended		Not Recommended		Not Recommended	
	Nova G3	3.819	4.646	2.205	3.031	3.071	3.898
	SuperNova2	3.819	4.646	2.205	3.031	3.071	3.898
	Titan	3.819	5.039	2.205	3.425	3.071	4.291

(For item number TE06017)

Jaw Set & Chuck Suitability		Expanding Action Specifications		Contracting Action Specifications			
Jaw Set	Suitable Chuck			Square Stock		Spigot Mode	
		Min	Max	Min	Max	Min	Max
Long Nose JAW	Precision Midi*	Not Recommended		Not Recommended		Not Recommended	
	Nova G3	2.126	2.874	1.142	1.969	1.575	2.362
	SuperNova2	2.126	2.874	1.142	1.969	1.575	2.362
	Titan	2.126	3.346	1.142	2.402	1.575	2.835

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(For item number TE00025)

Jaw Set & Chuck Suitability		Expanding Action Specifications		Contracting Action Specifications			
Jaw Set	Suitable Chuck	Expanding Action Specifications		Square Stock		Spigot Mode	
		Min	Max	Min	Max	Min	Max
25mm JAW	Precision Midi*	1.024	1.417	0.354	0.709	0.394	0.787
	Nova G3	1.024	1.811	0.354	1.102	0.394	1.22
	SuperNova2	1.024	1.811	0.354	1.102	0.394	1.22
	Titan	1.024	2.205	0.354	1.496	0.394	1.614

(For item number TE00023)

Jaw Set & Chuck Suitability		Expanding Action Specifications		Contracting Action Specifications			
Jaw Set	Suitable Chuck	Expanding Action Specifications		Square Stock		Spigot Mode	
		Min	Max	Min	Max	Min	Max
PIN JAW	Precision Midi*	1.024	1.378	0.276	0.669	0.394	0.748
	Nova G3	1.024	1.811	0.276	1.102	0.394	1.22
	SuperNova2	1.024	1.811	0.276	1.102	0.394	1.22
	Titan	1.024	2.244	0.276	1.496	0.394	1.614

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Imperial (Inch)

(For item number TE00130)

Jaw Set & Chuck Suitability		Expanding Action Specifications		Contracting Action Specifications			
Jaw Set	Suitable Chuck	Specifications		Square Stock		Spigot Mode	
		Min	Max	Min	Max	Min	Max
130mm JAW	Precision Midi*	Not Recommended		Not Recommended		Not Recommended	
	Nova G3	Not Recommended		Not Recommended		Not Recommended	
	SuperNova2	5	5.787	3.031	3.819	4.213	5.039
	Titan	5	6.181	3.031	4.213	4.213	5.433

(For item number TE06019)

Jaw Set & Chuck Suitability		Expanding Action Specifications		Contracting Action Specifications			
Jaw Set	Suitable Chuck	Specifications		Square Stock		Spigot Mode	
		Min	Max	Min	Max	Min	Max
35mm Bowl JAW	Precision Midi*	1.496	1.85	0.315	0.709	0.394	0.748
	Nova G3	1.496	2.323	0.315	1.142	0.394	1.22
	SuperNova2	1.496	2.323	0.315	1.142	0.394	1.22
	Titan	1.496	2.717	0.315	1.535	0.394	1.614

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Imperial (Inch)

(For item numbers TE00020, TE06025, TE06026, TE00070, & TE06006)

Jaw Set & Chuck Suitability		Expanding Action Specifications		Contracting Action Specifications			
Jaw Set	Suitable Chuck			Square Stock		Spigot Mode	
		Min	Max	Min	Max	Min	Max
Mini 20mm Jaws	Precision Midi*	0.79	1.63	0.39	0.79	0.32	1.18
	Nova G3	0.79	1.63	0.39	0.79	0.32	1.18
	SuperNova2	0.79	1.63	0.39	0.79	0.32	1.18
	Titan	0.79	2	0.39	1.18	0.32	1.57
Mini Spigot Jaws	Precision Midi*	1	1.77	0.39	1.22	0.32	1.18
	Nova G3	1	1.77	0.39	1.22	0.32	1.18
	SuperNova2	1	1.77	0.39	1.22	0.32	1.18
	Titan	1	2.16	0.39	1.61	0.32	1.57
Mini Step JAW	Precision Midi Step	1.06	1.93	Not Applicable		Not Applicable	
	Precision Midi Step	1.45	2.28	0.36	1.1	0.41	1.24
	Nova G3 Step1	1.06	1.93	Not Applicable		Not Applicable	
	Nova G3 Step2	1.45	2.28	0.36	1.1	0.41	1.24
	SN2 Step 1	1.06	1.93	Not Applicable		Not Applicable	
	SN2 Step 2	1.45	2.28	0.36	1.1	0.41	1.24
	Titan Step1	1.06	2.32	Not Applicable		Not Applicable	
Titan Step2	1.45	2.72	0.36	1.5	0.41	1.63	
70mm Jaws	Precision Midi*	2.76	3.54	1.46	2.56	2.2	3
	Nova G3	2.76	3.54	1.46	2.56	2.2	3
	SuperNova2	2.76	3.54	1.46	2.56	2.2	3
	Titan	2.76	3.94	1.46	2.95	2.2	3.43

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Imperial (Inch)

(For item numbers TE00024 & TE06006)

Jaw Set & Chuck Suitability		External Bowl Grip Max	Internal Bowl Grip Max
Jaw Set	Suitable Chuck		
COLE JAW	Precision Midi*	8.661	~ 11
	Nova G3	9.291	~ 11
	SuperNova2	9.291	~ 11
	Titan	9.449	
MINI COLE JAW	Precision Midi*	6.181	~8.5
	Nova G3	6.693	~8.5
	SuperNova2	6.693	~8.5
	Titan	7.087	