



# Turnaround

January 2005

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## Newsletter of the Association of Woodturners of South Africa

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### From the Editor

Here is the article on chucks as promised.

Peter Nicolle submitted an article on Gilding, which will appear in the next issue, together with the final details of the 2005 Congress.

Brian Jolly (Strand Hardware) contacted me to announce that the price of the Jet Mini lathe is now R2995- inc VAT.

**Please Note** that the annual membership subs for 2004/5 were set at **R60-**, not the **R50-** as mentioned in the previous issue. Please pay your club reps directly. If you have no club rep where you are, you can transfer payment to the AWSA bank account or send a payment directly to Eddie Marchio. Eddie's postal address is:

135 Juniper Street,  
Northcliff Ext 6,  
2195.

The Banking details are:  
ABSA bank Cresta,  
Cheque a/c 4051567354, AWSA

*Trevor Pope*

### From the Chair

Well, maybe I can blame the Tsunami for the delay.... Mostly, we were waiting to finalise the congress costs before we could send this latest newsletter.

Firstly, all the best for 2005!! I hope that it will be a successful year for all, whatever your indulgences!

As I write this, Stuart King is travelling around the country, and feedback that we received so far indicates that it is a hit! Quite a different approach to finishing I might add!

We have also managed to finalise the congress costs after receiving the final costs for the venue. Just as a headliner, the all-in cost for attendance will be R455, including a braai on the Friday as well as the gala dinner. There are several options available to day-visitors, accommodation packages etc, which we will send to you under separate cover.

Rolly Munroe has been confirmed as our international guest. More on the program to follow later.

I do urge you all to register as soon as possible, since it will make the organisation smoother once we know the attendance. Please do use the forms that will be distributed shortly to make the bookings, again to aid the administration process.

We will have another newsletter just before conference. See you there!!

*Chris O'Connell*

### 2005 National Congress

The AWSA 2005 Congress has been set for the long weekend of the **19<sup>th</sup> to the 21<sup>st</sup> March 2005**. The **Printer's College, Honeydew** has been booked. Registration will be Friday PM, 18<sup>th</sup> March and the congress will close at lunchtime on Monday 21<sup>st</sup> March (which is a public holiday).

We are looking at the program and sponsorship opportunities, so if you have any suggestions or proposals, please contact the organising committee. We welcome any suggestions.

We are calling for submissions for the program. There will be a mixture of beginner's and advanced topics, so if you have a particularly interesting topic or demonstration, please approach any of the AWSA committee to volunteer. It need not be a complete, polished topic – we will be glad to help presenters to develop topics to the level where they will be confident to present them at the national conference. Please come forward with your ideas.

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## Scroll Chucks for Woodturning

Trevor Pope

There are many ways of a holding work in a wood turning lathe – centres, faceplates, and variety of chucks ranging from home-made jam-chucks to sophisticated scroll chucks. Because of the versatility and reducing prices of scroll chucks, they have become very popular. Some turners have probably never used a faceplate, and many hardly ever work between centres!

If you are in the market for a chuck, this article may help you to pick out the best one for you. I have restricted this list to general-purpose chucks that are useful for a wide variety of tasks with wood. All of the chucks listed are scroll chucks, except the Masterchuck that uses a spiral thread. All are of the self-centring type and have four jaws that engage in a scroll-pattern threaded disc or spiral so that they move together. The scroll is rotated to move the jaws in or out to grip the work as required. This is the principle used for engineering chucks, so it is capable of great accuracy and strength, much more than is generally needed for woodturning. To open or close the jaws on the simpler chucks such as the original Nova, the scroll is rotated by means of levers (tommy bars). On engineering chucks or the Super Nova, a gearing arrangement is used. Some chucks, such as the Super Nova have the gear on the T-bar handle, whereas engineering chucks have gears captured in the body of the chuck with a square or hexagonal socket to receive a T-bar, such as the Vicmarc, Axminster and Super Nova 2. This does seem to be the best arrangement as the body is closed and the T-bar is easier to engage.

There is a large selection of woodturning chucks on the market, albeit fewer available locally. The only chucks that I could find that are freely available locally are some Teknatool chucks from Hardware Centre. The list below includes a number of popular chucks available internationally, so that you can make an informed selection.

The spindle thread is the threaded portion of the headstock spindle of the lathe that allows the attachment of accessories, such as faceplates and chucks to the lathe. There is a bewildering variety of spindle threads out there – you can see the lists on the individual chuck suppliers' websites. This must be a constant source of frustration for the chuck manufacturers, because many lathe manufacturers seem to feel the need to invent their own. The Europeans have tried to standardise on M33 x 3.5mm, whereas many of the North American machines use 1" x 8tpi. Most chucks offer inserts to adapt to the spindle thread. There are limitations on some of the larger threads, such as the M33 x 3.5mm on the Teknatool chucks, where the thread is machined directly into the body. Inserts to reduce the M33 x 3.5 to a smaller thread such as 1" x 8tpi are not available from Teknatool, but are available from Axminster and other sources. Check the threads before you buy, and look for inserts to allow the chuck to be reused on other lathes. You may need another insert, should you wish to fit your chuck onto another lathe. If you need additional inserts these are comparatively easy to have made up by an engineering company locally if they are not available off the shelf, so you need not worry too much about strange threads.

When pricing options, remember to check whether the spindle thread adapters are included – sometimes, these are sold separately. Also look at what jaws are included and price the additional jaws you expect to need. This will give you a full picture. If you set your mind on a chuck that is not available locally, it is relatively easy to order one over the Internet. Watch out for shipping costs – chucks are heavy, and you can wait several weeks, mostly due to delays in South Africa unfortunately.

Talking to WWA club members, the consensus of opinion was that until recently, the Vicmarc VM100 chuck gave the best value and performance, but now with the launch of the SuperNova 2, Teknatool has closed the gap, so you will have to judge for yourself. If you want a top chuck and don't mind paying extra, then perhaps the Axminster Super Precision is worth a look – it also has a wide range of accessory jaws available.

Thanks to John Speedy, Peter Middleton and Howard Eagleton for their inputs to this article – between them they have owned most of chucks listed.

Chuck Name, Supplier, and Pricing.	Type	Capacity	Size and weight	Accessories	Comments
<b>Masterchuck</b> - Peter Child £83- See <a href="http://www.peterchild.co.uk">www.peterchild.co.uk</a>	Tommy bar actuated spiral screw with locking ring. Additional jaws screw onto integral jaws	Exp 70mm, compress: 38mm; 7mm range	80mm diam 18 – 39mm spindle threads at time of order	Jaws and wooden jaw plates available.	Early design. Limited adjustment range is insufficient to cope with shrinkage between wet and dry wood in expansion mode. Smooth outside.
<b>Compact</b> - Teknatool One left at H/W Centre – Oct 2004 at R760-	Tommy bar actuated scroll chuck				Smaller capacity, limited range of jaws and threads meant that it wasn't very popular.
<b>Nova</b> - Teknatool See <a href="http://www.teknatool.com">www.teknatool.com</a>	Tommy bar actuated scroll chuck			Jaws – 25, 35, 50, 100, 130mm; long-nose, step, power grip and spigot jaws, screw, faceplate rings, Cole jaws, vacuum faceplate	First Nova chuck.
<b>Super Nova</b> - Teknatool Including 50mm dovetail jaws and 45 mm spigot jaws £107- from <a href="http://www.toolpost.co.uk">www.toolpost.co.uk</a>	Geared Key operating scroll chuck	Exp: 56mm, compress: 49mm 15mm range	100m diam	As above	Open back, key tightens CCW. Available, but mostly superseded by SuperNova2.
<b>Super Nova 2</b> - Teknatool R1760- including 50mm jaws, woodworm screw and insert from Hardware Centre	Hex key operated scroll chuck.	Exp: 56mm, compress: 49mm 15mm range??		As above	Closed back with 24 index holes, key tightens CCW, Jaws project at larger openings. Supersedes Super-Nova. M33x3.5 and 1 ½" threads must be machined into body – not available as an insert.
<b>Titan</b> - Teknatool	Hex key operated scroll chuck	Exp: 56mm, compress: 49mm 15mm range??	125mm diam	As above, but with larger jaw capacities available, up to 149mm	Closed back, tightens CCW M33x3.5 and 1 ½" threads must be machined into body – not available as an insert.
<b>VM90</b> - Vicmarc See <a href="http://www.vicmarc.com">www.vicmarc.com</a>	Tommy bar scroll chuck	40 to 80mm range	96m diam, 1.7 kg	Shark jaws, long nose jaws, 25, 70, 100 and 128mm jaws, step jaws, faceplate rings, bowl reverse jaws – 285mm and 385mm, vacuum plate, multipurpose jaws	Slim design
<b>VM100</b> -Vicmarc Limited stock from H/W Centre at R2200- plus insert. A\$208- from <a href="http://www.carbatec.com.au">www.carbatec.com.au</a> £127- from <a href="http://www.poolewood.co.uk">www.poolewood.co.uk</a>	Hex key operated scroll chuck	40 to 80mm range	96mm diam, 2.1kg (2.5kg shipping weight)	As above	Closed back with index holes, key tightens CW, hollow centre, insert included.
<b>VM120</b> -Vicmarc A\$250- from Carbatec £148- from Poolewood	Hex key operated scroll chuck	55 to 110mm range	136mm diam, 3.9kg, (4.5kg shipping weight)	As above, with 485 mm bowl jaws	Closed back with index holes, key tightens CW, hollow centre, insert included.
<b>VM140</b> -Vicmarc	Tommy bar scroll chuck	55 to 130mm range	138mm diam, 4.2kg	As above, with 485 mm bowl jaws	Slim design
<b>Oneway</b> - Oneway See <a href="http://www.oneway.ca">www.oneway.ca</a> US\$ 180-	Tommy bar operated scroll chuck	2" to 3.625" exp, 1.625 to 3" compr, (41mm range)	90mm diam, 2kg	Range of jaws and screws available.	Looks like a Nova chuck, limited to spindles below 1¼"

Chuck Name, Supplier, and Pricing.	Type	Capacity	Size and weight	Accessories	Comments
<b>Talon</b> – Oneway US\$ 210-	Key operated scroll chuck	2" to 3.5" exp, 1.625 to 2.875" compr, (38mm range)	89mm diam, 1.6kg	Range of jaws and screws available. Zig-zag jaw design	Looks like a Super Nova chuck, limited to spindles below 1¼"
<b>Stronghold</b> – Oneway US\$ 260-	Key operated scroll chuck		115mm diam, 3.6kg	Range of jaws and screws available. Zig-zag jaw design	Looks like a Super Nova chuck – includes the larger threads.
<b>Clubman K8</b> – Axminster £86- See <a href="http://www.axminster.co.uk">www.axminster.co.uk</a>  £81- from Toolpost.	Geared type T-bar scroll chuck		80mm diam	80mm C, dovetail, O'Donnell and gripper jaws; screw chuck and faceplate ring	¾"x16 tpi and 1"x8 tpi threads only
<b>Clubman K10</b> – Axminster £102-	Geared type T-bar scroll chuck		100mm diam	As for Super Precision	Wider range of spindle threads, price depends on thread selected.
<b>Clubman T8</b> – Axminster £81-	Tommy bar and C spanner scroll chuck			As for K8	¾"x16 tpi and 1"x8 tpi threads only
<b>Clubman T10</b> – Axminster £90-	Tommy bar and C spanner scroll chuck		100m diam	As for Super Precision	¾"x16 tpi and 1"x8 tpi threads only
<b>Super Precision</b> – Axminster £136-	Square key operated scroll chuck	3 mm upwards depending on jaws	100mm diam	100, 150mm jaw plates, button jaws, soft jaws, spigot and cylinder jaws, Dovetail and O'Donnell jaws, and large gripper jaws. Various sizes of faceplate rings and screw adaptors can be gripped in the jaws.	Adapted Metal turning (Engineering) chuck with wood turning jaws. Large and heavy, but very strong and precise. Various back plates, and indexing ring and eccentric adaptors can be fitted.
<b>BON100</b> - Bonham A\$181- from Carba-tec	Tommy bar scroll chuck		100 diam, 1.9kg		Resembles Nova chuck
<b>RP3500</b> – Record £86- See <a href="http://www.recordpower.co.uk">www.recordpower.co.uk</a>	Tommy bar operated scroll chuck	40 to 80mm range	96m diam, 1.7 kg	See Vivmarc accessories	Appears to be a relabelled VM90, ¾" x 16 tpi or 1" x 8 tpi threads only
<b>RP4000</b> – Record £128-	Hex key operated scroll chuck	40 to 80mm range	96mm diam, 2.1kg	As above	Appears to be a relabelled VM100, ¾" x 16 tpi or 1" x 8 tpi threads only

**Exp** = Size the jaws will expand into    **Compr** = Size the jaws will compress onto.

**CW** = Clockwise; **CCW** = Counter Clockwise. CW tightening is more intuitive for most people.

**Threads** – consult your lathe handbook or the lists supplied by the chuck manufacturers.

Metric and imperial threads are measured differently:

- A metric thread such as **M33 x 3.5** is a 33mm outside diameter thread with a thread pitch of 3.5mm (measuring between the tops of two adjacent threads).
- An imperial thread such as **1" x 8 tpi** means an outside diameter of 1 inch with a thread pitch of 8 threads per inch (counting the first top, so there are only 7 valleys).

**Pictures of Chucks.**

These are all taken from the web sites referenced above – thanks to the owners of the sites for the use of them. They aren't to scale, so use table above to get sizes.

**Axminster Super Precision**



**Axminster Clubman K8**



**Axminster Clubman K10**



**Axminster Clubman T8**



**Axminster Clubman T10**



**Peter Child's MasterChuck**



**Oneway Oneway**



**Oneway Stronghold**



**Oneway Talon**



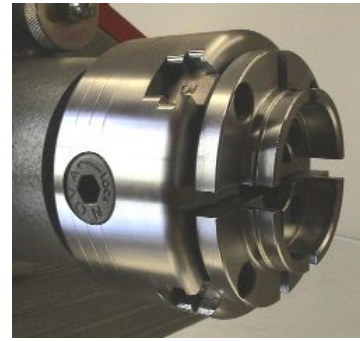
Teknatool Nova



Teknatool SuperNova



Teknatool SuperNova 2



Teknatool Titan



Vicmarc VM90 with tommy bars and screw centre



[Click to see a larger version of this picture.](#)

Vicmarc VM140



[Click to see a larger version of this picture.](#)

Vicmarc VM100 rear view with insert



[Click to see a larger version of this picture.](#)

VM120 showing insert and accessories

