Ask the Pro
Tools

Between September 2009 and March 2010, the C.O.W. newsletter featured a forum in which members could ask the club's more experienced woodturners questions. What follows is are the questions asked about tools and the pros' answers.

> I am a new turner and want to buy my first set of turning tool. Are the sets of tools that Woodcraft and Wood Werks sell what I need to buy? What tools should be in that first set? I am interested in turning both spindle legs and bowls.

Chuck Kemp:

First off, buy the best tools you can afford. Make sure that they are HSS (High Speed Steel). Both Woodcraft and Wood Werks carry several brands of excellent tools. Most of my tools are made by Sorby, but I have tools made by Crown and Hamlet. I would suggest a 3/4 inch spindle roughing gouge, diamond parting tool, 3/8 spindle gouge, and 1/2 inch skew as a starter set. I like the rectangle shaped skew with the sharp edges of the shank rounded over so that the skew moves smoothly on the tool rest. Also a 3/4 inch round scraper. If you plan to turn bowls you will also need 1/2 inch bowl gouge. Remember that roughing gouges are for spindle work only.

All of the tools that you buy must be reground to make sure they are sharp and with a profile that you like. Most of my grinding is done with an 8 inch half speed grinder (1800 rpm). I also use a Wolverine jig for the fingernail grind on my gouges.

Jim Baumgardner:

The three tools which I normally recommend to a new turner are the 3/8" spindle gouge, the 1/4" parting tool and a roughing gouge. Woodcraft has sets made by Sorby, Wood River and Pinnacle which all include these three tools. Sets are either 5 piece or 8 piece. Additional tools commonly included in the sets are a skew, a round nose scraper, a square nose scraper, a 1/4" spindle gouge, and a 1/2" bowl gouge. The price for a 5 piece set usually saves the cost of one tool compared to buying the tools individually.

Barb Crockett:

In my opinion it is best to buy high quality tools individually rather than in sets. Many of the sets of tools out there (and I'm not talking about the ones sold at Woodcraft or WoodWerks) are of poor quality steel. Even when they say high speed steel, there are varying grades of that as well. Oftentimes these tools are unusual shapes rather than the traditional bowl and spindle gouges found in name brand sets. Some can be regound to be useful but most cannot. The bottom line is the old "you get what you pay for" Woodcraft

and Wood Werks sell sets of name brand tools from Sorby and Crown. These are good quality tools. However, my experience with these sets is that there is always something in there that I really don't want or need which takes the edge off of any savings on the package. I would suggest starting with a good quality spindle and bowl gouge. 3/8" is a good size to start out, especially if you have a mini lathe. Next would be a parting tool and if you intend to turn bowls, a scraper. Scrapers come in all sizes and shapes. A standard round nose scraper 3/4" - 1" is a good place to start. For deeper bowls or vessels you will need a heavier scraper with a longer handle. Remember the 20% rule. For every inch your tool extends beyond the tool rest, you need four inches of handle on the driver's side to support it. So if you are hollowing a 4" deep bowl, you would need at least 16 inches on the other side. If you have a tool with a handle that is too short, it is easy to either turn an extension for it or just knock it out of the original handle and turn an entire new handle. The next tools in your cabinet would be a spindle roughing gouge and possibly a skew depending on how much spindle work you intend to do. The bottom line is that although it is a known fact that "he who dies with the most tools, wins!" Most turning projects can be turned with these five or six tools.

Floyd Anstaett:

I concur with you on the tool sets. I think that it's best to buy tools more or less as you need them rather than buying a set which will probably contain a lot of tools that you will never use.

For bowl turning I would suggest that you start out with a medium sized (about 3/8") bowl gouge and two scrapers. The scrapers should be square ended and round ended. For starting out, the scrapers don't have to be the great big ones. The ones made from 1/4 X 1 stock would work well. You will also need a parting tool.

For spindles I would suggest a medium sized spindle gouge, a spindle roughing gouge, a small (1/2 or 3/4 inch) skew chisel and a parting tool.

These tools don't have to be bought all at once. It's probably best to buy them as the need, desire and financial capability arises.

What is the single tool you use the most in your shop and what do you turn with it?

Chuck Kemp:

Probably the single most used tool in my collection is 3/4 inch Crown Bowl Gouge. I grind mine with a long swept-back fingernail grind. It can be used both for spindles and bowls. It can be a roughing gouge, a spindle gouge and a bowl gouge. Only if I need a finer cut or small beads and coves do I use a smaller bowl gouge.

Jim Baumgardner:

For me personally, my most used tools are the 3/8" spindle gouge, the parting tool, the roughing gouge and the 3/8" bowl gouge in that order.

Barb Crockett:

My most used tool would be a tie between a 1/2" bowl gouge and a 3/8" detail gouge. A detail gouge is just a spindle gouge that has steel beneath the flute that is in excess of 50% of the diameter of the tool. That being said, keep on collecting those tools. You're just one tool away from greatness!

Floyd Anstaett:

The tool to I use the most would probably be the medium sized bowl gouge. I'm thinking in terms of turning tools here. Obviously, I use the lathe every time I turn. The four jaw scroll chuck gets a lot of use also.

> I see all the ads for woodturning tools made with different steels. Kryo, HSS, advanced particle steel, etc. Can you give me any help in picking the tool made with the best steel?

Floyd Anstaett:

I have used Sorby high speed steel tools for probably 20 years or more and have no particular interest in experimenting around with these socalled super steels. As long as you stick with a good quality tool made from high speed steel and keep it sharp you will get along fine. Having said that, I did one time buy a gouge that was supposed to be made from some sort of advanced particle steel. I didn't notice any difference between that one and the standard high speed steel tools that I normally use.

Mark Damron:

With all the manufacturers offering the different turning tools today it can be very confusing when choosing the right tool. So, here's a break down on steels available today for woodturners and woodworkers.

M2 HSS
M2 High Speed Steel is used in manufacturing a variety of tools, such as tool bits, end mills, drill bits, taps and reamers. M2 is the grade of HSS and is known for its high wear resistance in machining of metals .

Kryo
Is M2 HSS that undergoes a cryogenic treatment in which it's subjected to temperatures below 300 degrees Fahrenheit after heat treatment. This process produces complex molecular changes within the steel which results in increased wear resistance and durability 3-6 times that of regular heat treated M2 HSS.

Advanced particle steel
Is a process whereby powdered metals are mixed and fused together under extreme heat and pressure to produce a steel that will hold an edge 3 times longer than M2 HSS.

Conclusion:
Although it's very debatable as to which steel and tool is the best, you should first talk to other woodturners and get a feel for what works best for them. Remember to take in consideration the type of woods being turned, green, dried, hard, soft, burls, etc., using M2 HSS for green wood, powdered metal for dried, hard woods and burls. Also, I forgot to mention carbide insert tools, which I believe are the future of turning tools. I talked with a expert who said tooling cost will just keep rising and will be to expensive. Carbide inserts are replaceable, cheap and will outlast M2 HSS and powdered metals. If you're in it for the long haul stick with the big names. Most of them have been making tools for a long time and have the best manufacturing processes.

Also, your choice will determine $$$$. M2 HSS will be the least expensive, followed by Kryo M2 HSS, and powdered metal being the most expensive due to the manufacturing processes involved.

My 2 pennies:
So, what steel do I suggest?
I have tools from Harbor Freight, Sorby, Crown tools, Oneway, etc.
But for me the best tool and steel by far, that I have ever used is…..the sharpest one!
Remember for safety and optimum