

# Kurt's clinic

Kurt Hertzog gives some answers to readers' questions

## CBN wheel

**Question:** I'm going to buy a CBN wheel for my grinder. Which would you recommended – 180 grit or a finer, higher grit?



Regardless of the wheel media, the grit size is imparted on the steel of every tool it touches, creating the serrated cutting edge

**Answer:** The grit you choose for your grinder, whether CBN or traditional aluminum oxide wheel, is really dependent on your end use and needs. Every tool you sharpen is really a 'serrated knife' edge with the serrations' pitch based on the grinding wheel grit.

Even with a fine wheel, as you note, you'll still have a serrated edge, albeit a pretty fine one. It will be excellent for putting a keen edge on your already shaped tools but will be less than ideal if you need to shape any tools. Removing a lot of stock with a fine wheel grit is a slow, tedious, and heat-



The reasons to select a CBN wheel over AlO<sub>2</sub> is the lifetime without dressing and, depending on the type of wheel selected, the ability to grind safely on the side face as well as the front

generating process. If you'll only sharpen your tools, you can use a fine grit, whether 180 or some other grit in the fine category. If you need a wheel that will do shaping as well as sharpening, you probably will be better served by selecting a coarser grit. That grit could be in the 80 or 120 range – coarse enough to do shaping and fine enough to do sharpening. The grit selection suggestions are identical whether you are using AlO<sub>2</sub> or CBN. Both wheels are identical in function. The CBN advantages are lifetime, no dressing, and possibly, side of wheel use.

## Equipment needed

**Question:** I am new to woodturning and don't have any equipment. I'm on a tight budget and need to be very cautious about my spending. I'll probably be buying used so what should my first purchases be and what should I watch out for?

**Answer:** Buying used, but smart, is a fine way to get quality tools and equipment at a good price. To get started, you'll need four things. Be certain to obtain and use the necessary personal and respiratory protection equipment (PPE & RPE) – eye protection lung protection should be first on your list. Include a face shield, goggles or safety glasses along with your dust mask first.

Your lathe should be tailored as best you can to your intended turning tasks. If you intend to turn smaller items such as tops, bottle stoppers, pens, ornaments and the like, you'll do nicely with a mini or mid-type lathe. If you plan to turn platters, larger bowls, hollow vessels, furniture parts, or other larger parts, you'll need a larger floor-mounted lathe. Your measurements should be distance over bed bars for the diameter capability and the distance between centres for length of work capacity.

Unless abused, there is little that can go wrong with a quality lathe that can't be fixed or repaired/replaced. Buy a quality lathe rather than a clunker. It's a false economy to buy a low-quality lathe that won't please you and certainly will have little resale value. In addition to your key tools, you'll need a sharpening system. Don't forget this key item. If you can't sharpen tools, you'll turn all tools into scrapers and use them as such. Bad habit.

So the four key items are PPE & RPE, lathe, tools, and sharpening system. There should be included a valuable fifth item: get some instruction from a capable turning friend, turning club member, or training class. Self-taught turners rarely get too far because they don't build on solid fundamentals. Get into a class or a club or both.



There are many niceties in a turning workshop but they all revolve around the lathe, tools, sharpening system, PPE and RPE



Often overlooked by newcomers is a sharpening system. It is a huge mistake. Sharp tools and good fundamentals are key to turning

## Drill chucks

**Question:** I want a drill chuck to mount in the tailstock of my lathe, which is a Powermatic 3520a. Looking online just made me more confused. Can you point me in the right direction?

**Answer:** Your woodturning retailer should be able to offer you several different quality levels of drill chuck mounted on the appropriate Morse taper for your lathe. For the Powermatic 3520a, you'll need a #2 Morse taper for both the headstock and tailstock.

Don't limit your use of the drill chuck to just the tailstock. You can use a drill chuck in both the headstock and tailstock, depending on your application. Knowing your taper needs, your next choices involve the drill chuck size and quality. For size, most chucks have a maximum-size drill shank that they can accommodate. If you'll be doing larger drillings, get a drill chuck that will accept

drills in the size that you'll need. Not usually quoted but worth knowing is the minimum size drill. Most think every chuck will grip a very small drill. The larger the chuck size, the less likely it will accept a very small drill. If you need to use very small drills, be certain your drill chuck will accept these smaller sizes.

Sometimes you'll need two chucks. One large enough to handle your large drills and one small enough to do the precision drilling with small drills. Quality speaks for itself. You can buy a No.2 Morse taper drill chuck that will accept up to a 13mm drill for £15 on sale. You can also buy the same thing, more machine-tool grade, for

£220 with other choices in between those prices. Choose as your budget and precision/durability needs dictate.



Selecting a drill chuck requires the taper size and the desired maximum drill shank. Notice the precision mini chuck with a collet mount



A Morse taper was never intended to provide high retraction force. Good practice requires the operator to provide this force

Send in your questions to Kurt's email: [kurt@kurthertzog.com](mailto:kurt@kurthertzog.com)