

# Kurt's clinic

Kurt Hertzog answers readers' questions

**1** An example of stairstepping the parting tool cut. By cutting a clearance larger than the width of the tool thickness, there is no frictional heating on the side of the tool **2** Making each cut a modest depth, moving over and cutting the widening path, then proceeding back and forth. This technique makes deeper parting cuts safer **3** My parting tool choice with the widening cut being made. Whether widening by  $\frac{1}{2}$  or some other fraction of the width, the amount isn't as important as it exists.



**My turning instructor is suggesting I buy a diamond-shaped parting tool. I think it is too fat. His reason is it is safer. Do you teach using a diamond parting tool?**

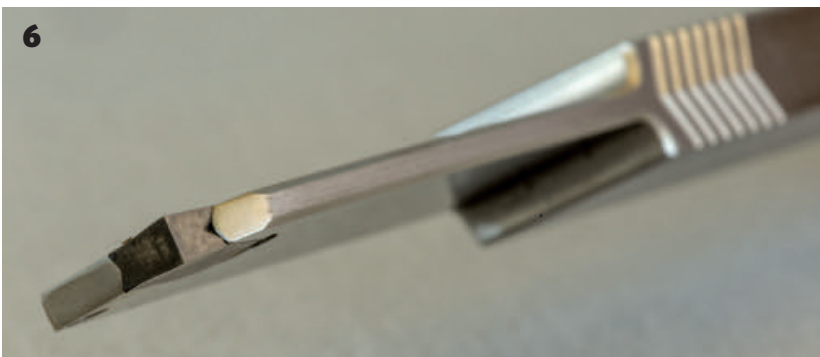
Your instructor is correct. By design, the diamond shaped parting tool cuts its own sidewall clearance as you use it and cut deeper into your turning. It minimises overheating due to minimal sidewall friction, and all but eliminates the hellacious catch that can occur when the heated wood and steel grab. I agree with you that it is too fat, i.e., wide. No, I don't use or teach the use of the diamond parting tool unless the student owns one or the school has them as their classroom tool kit. The use is simple and sharpening is just a bit more demanding than the traditional

parting tool. While being a bit fastidious, I always sharpen the tool so that the cutting edge is directly in line with the tool side diamond ribs. The diamond tool does what it is supposed to do but I find it too wide for my general use as well as being a bit long and awkward for other delicate cuts.

For the most part, I'd rather have my  $\frac{1}{8}$ in standard parting tool. Being smaller, thinner, and shorter, I use it for a variety of things in addition to parting. I teach my students a safe way to use the traditional parting tool. The reason I teach the technique of stairstep cutting your own clearance as you progress cutting deeper, is that you can now use any parting tool made. This can range from the thin Chris Stott-style parting tool to the bigger beading/parting tool on much larger stock

and beyond. Properly presented, the standard parting tool will cut nicely and progress deeper. Without cutting your own clearance, the side walls of any standard parting tool heat up with the friction with the wood as more and more tool sidewall surface becomes engaged the deeper you cut.

A SAFE SOLUTION is to make a clearance cut, slightly widening the parting cut wider than the width of whatever parting tool you are using. Cut a little bit, retract the tool, and start a parallel cut right next to the first essentially widening the cut to  $1\frac{1}{2}$  times the width of the tool. There is nothing magic about  $1\frac{1}{2}$  times or any other clearance. If your parting tool doesn't rub on the sides of the cut as you venture deeper, you'll be in good shape. I use  $1\frac{1}{2}$  or less. You can use anything



**4** The makers of the carbide tools have adopted the equivalent of the diamond point tool by building in the clearance cutting feature **5** It doesn't take much to cut a clearance path. A closer look at the parting tool carbide cutter shows the taper on the nose to cut the wider, clearance path **6** Another clever feature on the carbide cutter parting tool is the narrow width that bottoms out on a widening tool with a hard shoulder discouraging cutting deeper.



that pleases you. This step and repeat of cutting that clearance path takes no time at all and will make whatever parting tool you are using safe. Stairstep down into the turning you are parting with whatever parting tool you use. I have a .035in thick Don Derry tool that was available many years ago. The Stott parting tool and knockoffs run about .070in thickness. What I call the standard thin, small

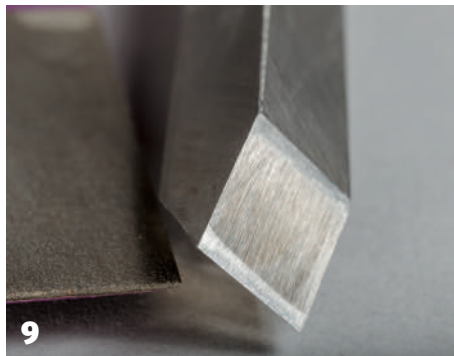
parting tool having a thickness around .140in. Like any learning process, learn it properly, practise it, and it becomes rote. Can you use a diamond shape parting tool? Certainly. What if you pick up the Derry, Stott, standard Sorby (or other manufacturers) parting tool? Will you know how to use it safely? Whether you buy the diamond parting tool or not, ask your instructor to teach you the safe way to cut a

clearance width as you part deeper. Incredibly simple to learn and use. The safety and versatility of the technique is well worth learning.

Once you know the stairstepping technique of cutting a slight side wall clearance, you can make a value judgment on which parting tool you'll add to your kit. Over time, I'm sure you'll have more than one size and width.



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**7** My cast of parting tools accumulated over the years. Do I need them all? Probably not, but each one has a use that it excels at based on nose grind or thickness

**8** Different widths and different nose grinds lets these parting tools function for other cuts at the lathe. Many turning features can be enhanced with the cuts these tools make **9** I grind my parting tools as little as possible. Once ground with a hollow grind, I can easily sharpen (touch up) the edge with a diamond hone **10** Whether thick or thin, all my parting tools lend themselves to honing as a method of sharpening or touching up. Tools last longer and a great edge is only a few hone strokes away.

### **I'm a relatively new turner and I'm in the process of buying my tools as I can afford them. Why such a diverse range of prices? Why such a range and array of claims?**

Imagine your business is making and selling tools. There are a few proprietary designs but, for the most part, every tool in every family is much like the competitors' offering. Some bigger, some smaller, some in families, some standalone, etc. To set themselves apart, many manufacturers do something different to the traditional commodity steels.

Perhaps they perform a plating or other chemical process, or dip it into cryogenic temperature liquids. They all can offer different handle shapes and sizes, different

woods, different turning star endorsements, and more. They can also venture into speciality alloys and powder metals with their inherent benefits to abrasion resistance, heat tolerance, hardness, or other. Anything done along the way can add costs to the product. With the costs of the base materials, added processing, fancy accoutrements, and packaging, the driver for costs then reverts to brand recognition, distribution channels and costs, sales outlet mark-ups, and volumes of production.

The base materials, add-ons, marketing, production volumes, and profit margin at each level of distribution creates the variation in prices at the retail outlet. The range and array of claims many times tout some advantage over competitors, but the

hobbyist may not have the expertise to appreciate. On occasion, claims that don't pan out scientifically are just hype to assist with the marketing effort. The average basement turner will likely never detect their 15% reduction in sharpening frequency or some other advantage a manufacturer offers. There is nothing wrong with looking at and buying gently used tools. Unless the original owner totally abused things, there is little to go wrong with a quality tool. Your local turning mates will likely have tools they've grown out of. A quality brand, in the size and shape you desire, in high-speed steel or beyond that hasn't been improperly treated, can be a great purchase. A fair price on a quality, well-maintained, used tool will be 50% or less of the new tool price.



**I don't have much wood to store but I do want to be certain is it usable when I'm ready for it. What is the best way to store wood without degradation?**

I think we've covered this in the past, but it has been a while so let's revisit it. Always remember, wood will forever take on and give up moisture from its environment. Regardless of species, finish, size, or shape, it never stops moving. It has three, usually dramatically different rate, coefficients of expansion on the three axes. Wood will always move based on the taking and giving of moisture. Sometimes a minuscule amount and sometimes a lot more. There are a couple of aspects to your question. First, are you planning on storing green wood or dried woods? Second, are you talking about a few pieces or a sizeable amount?

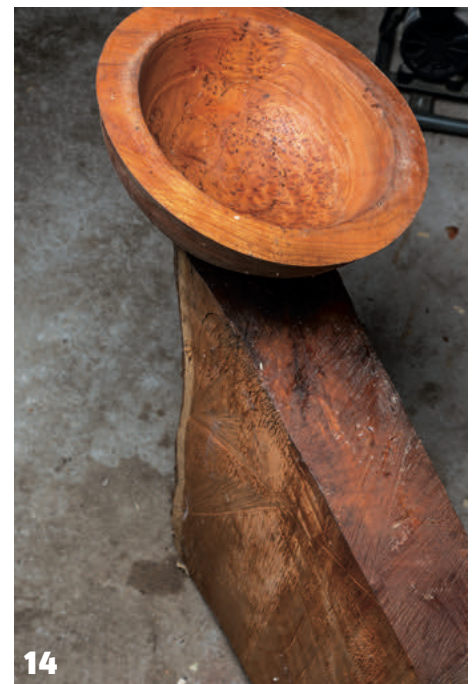
Let me touch on some basics. For green wood, you have two major choices. One method is to leave the green wood in log form if that is how you receive it. When you need some of that wood, you'll probably have to lop off the very end of the log to get to the usable wood because of drying and checking on the very end. This end piece helps preserve the rest of the log. Now the new open end will dry and check again while aiding in preserving the balance of the log until the next time.

Another method of storing green wood is to use an end grain sealer on all the cut pieces. There are several of these products on the market. I use Anchorseal because it is local to me, and my club buys in 55-gallon drums. Other turners swear by different brands, but I only have experience with the one. Anchorseal is an emulsified paraffin that you paint on to the end grain of your green wood. It prevents the rapid loss of moisture through the end grain and the uneven drying that causes. It's the uneven drying that really causes damage to wood, especially if it is rapid.

You can use this method of end grain protection on both green wood being stored, whether cut or in log form, and green wood work in process. Any green wood in process on the lathe will get some end grain sealer if I need to leave it for longer than a few minutes. A plastic trash bag wrapped around the turning will help too. I store my all of my green wood outdoors. I don't usually receive my green wood in log form. I do prep my blanks with Anchorseal and leave some extra length for any potential loss. BTW... leftover latex paint will do the end grain sealing job as well. By using latex paint, rather than drying white or clear, your outdoor wood storage will have the colour of your interior room excess paint. You can be proud of your colour choice or not. My reasons for outdoor storage for green wood are space needed and any potential critters living in the wood or bark.

Dry wood can be stored with little concern about drying and checking. If it is already dry and at or close to the ambient relative humidity, it has little potential chance of degrading. I store my dried woods in my shop in the basement. The reason for using the basement is the constant climate. My basement, largely one of my shops, is below grade. Being below the frost line for the most part, it is a constant 55-60°F year-round. With dehumidification, the humidity is also very stable. The wood acclimates as needed and will suffer no ill effects that I have seen.

If you are picking any storage location, look for stability. Big changes in temperature or humidity are the enemies of wood, as is sunlight (uV). Outside, my green wood is stored off the ground on patio block pads. Sealed and covered with waterproof tarps, I've had some green wood spend many years before I pressed it into service. For dry wood, I use the floor-to-ceiling stainless steel food service racks for storage. With a load limit total over 2000lbs, I can fill up each of the racks as much as I can. Too many blanks make finding stuff a bit of a chore.



**11** Some of my green wood storage, stacked on the pads to keep them off the ground. A coating of Anchorseal, stacking off the ground, and a covering tarp works for me **12** One of the pieces stored outdoors being readied for turning. The end grain was coated although the important part is the burl **13** There are other brands available, but I use the locally made Anchorseal. One of my local clubs buys it in bulk so the members can take advantage of the quantity savings **14** I use end grain sealer liberally on wood being stored as well as work in process. A first-turned green wood bowl as well as a cherry slab coated for protection.