

# Kurt's clinic

Kurt Hertzog answers readers' questions



PHOTOGRAPHY BY KURT HERTZOG

**1** On pressure vessels, I tend towards more conservative blow off valves and a high quality overpressure valve **2** My rework of the bargain paint pressure pot was total replacement of all components with better quality devices **3** My stable of pressure pots includes a re-plumbed bargain paint pressure pot and a larger capacity commercial pressure pot

## I'm just learning the ropes about casting and want to get your opinions on pressure pots. What features should I be looking for? Whose do you recommend and why?

Let me answer your second question first. I avoid recommending specific brands in my articles or column. With sufficient information from me and others, you can make your own informed choice. I'll try to add to other information you may have. Also, it's unfair to other brands in the marketplace to mention just one and not all. Let me share my thoughts.

With many years as a scuba diver, along with years of industrial gases use, I'm not afraid of metal containers under pressure, but I'm certainly respectful. Be mindful that your pressure pot, even pressurised during use to 50-80psi, has plenty of stored energy. Poor quality, cobbled-together systems, rough handling, over pressuring, and other mishandling of any pressurised container can be dangerous.

There are specific pots designed for casting that have all the bells and whistles you'll need. I just added one to my stable of tools in addition to my paint pot I adapted for casting many years ago. My selection and purchase of a built specifically for casting pressure pot was based on

my familiarity with the company, the completeness of the features, and it being on sale at my local Woodcraft.

Features I want in any pressure pot are: quality construction, a good sealing system, a proper value overpressure blow off valve, a decent-sized, legible pressure gauge, industry standard quick connections (Milton or Milton type) and decent ball valve flow controls and shut-off. With these and, obviously, sufficient capacity, you'll have a very functional pressure pot. Pluses are a non-stick liner and roll-around casters.

Have I bought the imported, cheapie painter's pressure pot to use? Sure, but I did a plumbing rework to change the overpressure valve to a quality valve of my pressure choice. I pick a valve well below the recommended limit for the pot, but still workable for my needed pressure. The gauge, piping, quick connects, regulator, and ball valves were far better quality. Did I save money? Probably not, but at the time it provided a functional and safe pot for pressure casting. BTW... I still have it and on occasion use it when I don't need the capacity of my commercial pot. If you decide to adapt the commercial painter's pressure pot, you can add these items to get to the same point. Be certain to do it properly for safety.

**I am turning some walnut and I can't seem to get rid of sanding lines. When I do the same thing in oak, it turns out fine. I start with 120, then 220, 320 and finally 600 grit. Help please!**

Let me give you my opinions on sanding in general and then some specifics. First and foremost, sandpaper is a cutting tool. Don't treat it or use it as a crutch to cover up poor turning, but rather as the tool that it is. Its purpose is to finely cut and fair your other cuts together. It is prepping the surface for accepting a finish. Also, like your other cutting tools, there is a price difference between chicken salad and chicken droppings. Quality sandpaper, used properly, will be one of the most useful and powerful tools in your kit. I'm pretty sure the problem you are experiencing is your jump from 320 to 600. You might want to insert some sanding with 400 in between.

Depending on what you are sanding – different species of woods, various plastics (extruded or cast), bone or antler, or metals – you may need a more complete range of grits. There is a reason the manufacturers offer 100, 120, 150, 180, 220, 240, 280, 320, 360, 400, 500, 600, and finer beyond 600, along with coarser than 100. It isn't often you need all of these intermediate hops, but there are times they are extremely helpful.

My full kit of sandpaper contains all these grits except the 500, although I only keep a few sheets of 120, 180, 240, 280, and 360 for the special-needs sanding. Usually when I need finer abrasives beyond 400, I start with my Micromesh products up to the desired endpoint. These work on wood but are most beneficial when dealing with plastics.

I recommend that all sanding be done at a low surface feet per minute, i.e. slow down the lathe. Heat is the enemy of wood! By going too fast, your sanding is not only generating excess heat but hopping over the surface as you sand. I cringe when I see someone wearing a glove to protect their hand from the excessive heat of sanding too fast. Too high an rpm is counterproductive for quality sanding.

A fine woodworker never uses a belt sander to finish-sand high-end furniture. Running slowly, working through the grits, cleaning between grits, and sanding axially as needed will yield the best results. Sanding axially, benefiting some turnings, is simply turning the lathe off and rotating the spindle slowly as you sand lengthwise. On certain turnings, I do this with each grit after sanding under power radially before I move to the next.

Regardless of your sanding direction. I suggest that you clean the surface with a quick wipe of a paper towel between each of the grits. This helps ensure that any shedded abrasive particles don't remain behind to be carried around by the next finer grit. I find wiping a paper towel is far superior to blowing off with compressed air. It's as quick and far more effective, in my opinion. Don't hurry to move on to the next grit until you are ready. For example, you can never effectively remove scratches left by 220 with 400 grit later on. While it really hurts all of us immediate gratification turners, adopt the mantra of Bruce Hoover of the Sanding Glove: 'Learn to love sanding.' If it is any consolation, my bugaboo species to sand well are cherry and blackwood. I always seem to find scratches that I need to step backwards to resolve. ●



**4** You need not have a box of each grit of sandpaper, but you should have some of each of the values. You won't always use each step but have it when needed **5** For finer sanding beyond 400, I use Micromesh products and liquid 'polish' as appropriate. You can also buy finer sandpaper grits well into the thousand in the automotive arena **6** When power sanding, set your lathe speed and your power sander speed to maintain a reasonable sanding speed. No fingers involved to tell you of overheating