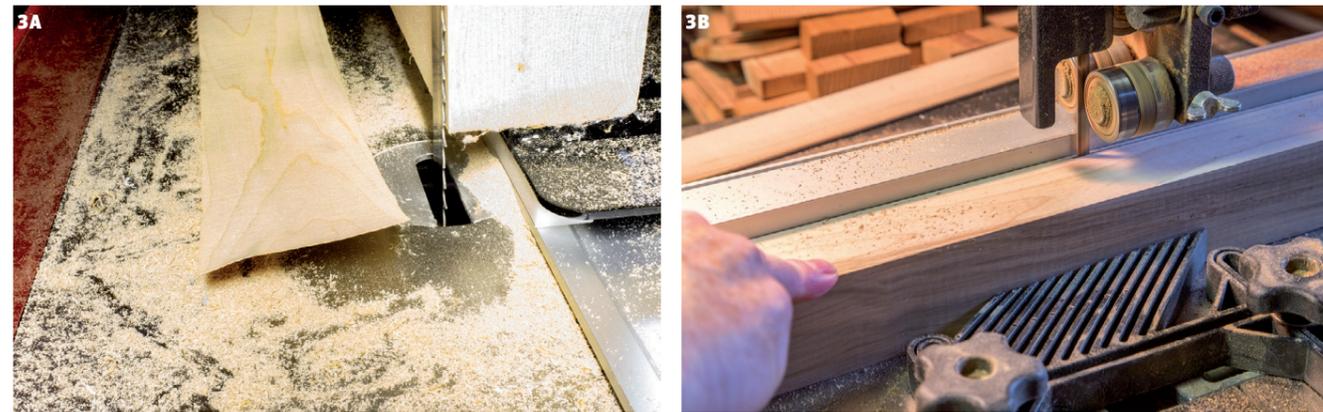


Kurt's clinic

Kurt Hertzog answers readers' questions

When I first started turning, my early teacher always had me wear a dust mask. It didn't bother me too much but I'm beginning to wear it less and less. Should I be wearing it all the time?

The short answer is, 'it depends'. Wearing it all the time will never hurt you. Should you wear it all the time? You should be the judge. If it isn't a bother, wear it. If it fogs your eyeglasses like mine do, there are times you may not want to unless needed. PPE includes dust masks (nose/lung protection) and is for your short and long-term health. In my experience, most workshops have plenty of airborne dust from a variety of tools during and after use. Unlike eye protection, which should always be used, I'm a believer in 'as-needed dust masking'. I always use it or a filtered air helmet when sanding anything or having created dust from other equipment. Other than that, I tend to use it as needed based on the material (wood, plastic, metal, bone, antler) and what I am doing to that material. As important as when you wear a mask, is it the correct one? The size of the particles that you inhale, regardless of material, is the key. If the particle sizes that



are a problem are under 10 microns in size, having a mask that filters 10 microns and larger doesn't help you much since everything smaller flows through. Much like a chemical filter mask worn when working with hazardous materials. Improper or spent filter cartridges on a chemical mask don't help you protect yourself. Wearing something ineffective is false security. Be certain that what you are wearing, particle or chemical masks as appropriate, is the correct filter element and is fully active and effective.

1 Wearing a mask to filter out dangerous dust particles doesn't help if the mask doesn't block them. Check the specifications on the label to get proper filtration. **2** The supply of masks has been steadily increasing. Big box stores, your local woodturning shop, or mail order. Get extras since they don't last forever. **3** Even with the dust collector connected and drawing at the equipment, many processes will create a lot of airborne particles in the shop. **4** I ALWAYS wear my dust mask whenever sanding, even with the dust collection system sucking in the sanding debris right at the source. Good practice regardless.



PHOTOGRAPHS BY KURT HERTZOG

Are the 'cheapie' carbide cutters any good? They are much less expensive than the factory replacements. They seem like they would be the cutters to buy.

We've touched on this in the past, but the question does come up often, so we'll have another go around. I can't speak to any differences in the manufacturing processes, carbide particle size, uniformity, or purity, or specifics of the geometries of the aftermarket carbide cutters. I have used them as well as the OEM replacements. Your comment about 'cheapie' might carry a derogatory tone for some readers. Perhaps, 'less expensive' aftermarket cutters are more suitable terms. Product selling costs and product development cost recovery can include the development, materials, process, tooling, volumes, production losses, packaging, shipping, advertising, and more. Some companies can keep aspects of this lower than others. Are the aftermarket cutters the same value (usable lifetime, performance, and overall cost)? I'd suggest you try some of them out for yourself and compare. If you are getting acceptable functionality and lifetime, you have your answer. It should be an easy comparison. Remember, all apples aren't equal so you need to compare two specific manufacturers' products to compare, not a mixture of different p/n unless it will be a bake off. One aftermarket product may not be the same as another, much like differences in OEM offerings. In the end, find the product(s) that work the best for you at the best cost. Don't forget to include the ability to touch them up for additional lifetime. Some may be better in this regard than others. This is all part of the total value proposition.

I am not getting the suction I need at the far end of my dust collector hose. I'm using 4in flex hose so I can move the vacuum line to different parts of the shop when and where I need it. Short of buying a larger, more powerful unit, what can I do to get more draw?

I'm guessing that you have a long hose to reach your farthest need and it likely is a ribbed hose to let it flex easily. Not knowing your line length or your dust collector specs, let me share some generic air flow information. The death of good, low drag air flow is any restriction. Restriction can be caused by flow tube diameter and length, directional changes, internal surface texture drag, and any ribbing-



5 A selection of the OEM carbide cutters available on the market. The consumer rarely understands the myriad costs involved in the total product cycle. **6** Some of the aftermarket carbide cutters that I've had the opportunity to use. As noted, each turner needs to decide if the aftermarket or OEM replacement is for them. **7** I'm a fan of hollowing with carbide cutters. I like getting curls from my cutting rather than dust and debris.

induced turbulence. Since you are at 4in diameter hose now, you probably can't go larger, so you are stuck with that diameter and the drag induced by that hose length. Also, I'm assuming it is 4in all the way to the dust collector with no necking down or reducing adapters at any point. Any adapters to fit to smaller connections anywhere along the line are problematic. Your directional change losses can be minimized by keeping your hose as straight as possible. Don't bend it around tight corners, like pulling around machinery or room structures, if possible. Think gentle radii bends at any required bends. The ribs in your hose are adding drag and turbulence problems. The hoses without flexible ribbing are less convenient at times but the absence

of ribbing reduces the drag and turbulence creation inside as the air passes. Three quick suggestions. Change to a hose without ribbing if you can. Shorten the needed hose length by more centrally locating the dust collector in the middle of the locations where the vacuum is needed. Install straight runs of 4in hard wall vacuum line as much as possible, with blast gate locations as needed allowing for very short flex line use as needed. Any or a combination of these can help. Will it be enough? I don't know, but none of these can hurt your end results. Understanding airflow is a science and an art. There are several information sites on airflow for dust collection. One that I think is a good site with a great depth of info is <https://www.oneida-air.com/>.