The Micro Wood Kiln for Woodturners—Part I *The Mad Woodturner*

Drying wood for woodturners is never an easy thing. We are so conditioned by the lathe for instant gratification in results that we expect that same speed in everything we do. Wood has it's own schedule for drying and it doesn't always (or ever) coincide with our own ideas for it. Although there are many methods for drying wood for woodturners, the kiln still remains the most gentle, surest across the widest range of woods, while being "quick" in balance of these other factors. The biggest problem with a kiln is that it is often a large, complicated and costly building. Being so costly, it only makes sense that it is in constant use with large quantities of wood drying at any one time.

What I'm going to present here is a low cost (under $25), small and uncomplicated kiln that you can build yourself. I won't go into much detail about how kilns work and the theories behind drying wood or specific kiln schedules. These things can easily be found at a library or online. Maybe I'll discuss those topics in a later article. I'll be concentrating this article on the actual design and some of the features of these kilns instead.

First of all, let me say that these kiln plans are only one way to do it. You can make them bigger or even smaller in size. Not all of the components are absolutely necessary. You can rearrange them to suit your needs and space. Larger kilns have different concerns but the basics are the same.

Heat is what is going to draw the moisture from inside the wood and allow the moisture that is at the surface to be held in the air inside the kiln. My heat source is just a simple light bulb. A single 40 to 60 Watt bulb is plenty for such a small container. I have the bulb wired underneath to the weatherproof socket about 1" above the floor of the bucket. This is because there will be condensation accumulating down there. The wire to the bulb is threaded through a hole in the bottom of the bucket and then sealed with caulking.

Air Circulation does a couple of things for us. Air circulation helps the transfer of heat from the heat source to the air and then back again to the wood surface. It also helps greatly in mixing the heat around the entire kiln. This is very important! And, at certain points in the drying cycle, the air circulation aids in moisture removal from the kiln by means of ventilation. For a source of air circulation, I use old, noisy computer cooling fans that are no longer useful in computers. You can use the power supply from an old computer to power them or a 9 volt battery (the fans are usually 12 V) will run them albeit a little slower. The fans are just attached to the lower part of the lid with the power supply attached to the top. I space the fans apart so that there is good circulation all around. Put a little spacer between the lid and fan so that air can get behind and then blow down.

Ventilation to the fresh outside air supply is needed to control humidity levels in the chamber especially when the wood is giving off a lot of excess moisture. I provide ventilation at the bottom of this kiln down near the bulb. I just cut slits or drill holes in the bottom of the bucket. This also allows you to drain excess condensation too. You don't always want these ventilation holes to be open so I just put some tape on them when they should be closed.

Extra things in here are the mesh (perforated hardboard works too) shelves that allow wood to get more air between them and the stovepipe in the center that lets heat circulate.

Total Cost: $ 22.00