

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

The last newsletter introduced you to the Bucket Kiln for Woodturners made from just a 5 gallon bucket and a few scraps of equipment. This time I'll introduce a different design but still keep it under \$25 like last time. I'll call this design the Cooler Kiln. It's made from a styrofoam cooler that I picked up from Wal-Mart. It's a large cooler (the largest they carried at the time) and is a little larger than the Bucket Kiln. It holds about 1.5 times the amount of wood that the Bucket Kiln will hold. It can also hold a little larger pieces. Other than those differences, it's basically the same kiln. Many of the components are the same and the overall idea is the same too. I'll not detail the components in this kiln that are common with the other kiln. Instead, I'll describe some of the differences between the two and then, in the next newsletter, go into some of the why's and wherefore's of using these small Micro-kilns.

Lots of Hot Air

The biggest difference in this kiln as compared to the other one is that the airflow is different. The other kiln had the air being heated at the bottom and rising through a standpipe until it reached the top (with some vents on the way up to help make heating more even). Then fans would blow that warm air from the top down through the stack of wood from the top until a circulation of warm and cooler air was created. This kiln warms the air by having the fan pushing the cooler air over the heating element (a light bulb) and forcing it to the side of the cooler. The warm air is then forced down that one side of the kiln and moved over the wood in a horizontal fashion until it reaches the other side. The fan at the top of the kiln pulls that air up to it and circulates it. By the way, this is the basic design of most medium to large kilns made today. The really huge kilns in commercial operations are far more complex in design but the basic principles are the same.

Air Deflector?

A thin metal sheet separates the heating bulb from the wood stack. This is because the air needs to circulate within the kiln so that even heating and air movement is achieved through all the wood. All I've done is just make the metal sheet as wide as the inside of the kiln and attached it to the lid. The light bulb, fan, and air deflector raise as I raise the lid. This way I can easily see and adjust the wood inside just by raising the lid. The air deflector is very important and must be positioned correctly for the maximum amount of airflow. Note: Be sure to give the air deflector a slight slope from one end to the other. This lets the condensation that develops on it to travel down it and hit the bottom of the kiln harmlessly. Otherwise, you'll get water spots on your wood.

