

Making a Bowl Kiln from a Discarded Dishwasher:

Supplies:

Dishwasher that has a door that latches shut tightly, preferably a “tall Tub” unit with existing insulation intact. Also make sure that there is a vent in the top of the door to let moisture escape. I think that all dishwashers have to have a vent like this, but there are many kinds out there. (If you find a portable one it might be pretty in your shop and you can use the top for other things.) Portables are like hens teeth to find. A good source of these is your local appliance retailer who installs them and removes the old ones.

Metal shielded trouble light - \$20.00

Supply of 100 watt incandescent light bulbs @ \$ 3:00 per 4pack. These will be getting very rare so stock up on them!

Angle grinder or wire cutters

Pliers, screwdrivers, 3/8” drill and bit, and a small saw such as that on an army knife..

Doing it!

Once you get the dishwasher, open it up and remove as much hardware as possible. Keep the baskets to put the bowls in, but using the grinder or wire cutters, cut away all of the upright plate and bowl separators, leaving empty baskets with a flat bottom. Upend the unit to drain any water from the pump.

Drill and saw a small entry hole in the lower back or side of the unit for the male plug of the trouble light to pass through. The hole should be below the ledge on the sides that the basket rollers roll on. Then install the light by passing the plug from inside the washer body to the outside and pull most of the cord out leaving the trouble light inside laying on the bottom of the unit with the open part of the light facing upwards. The metal shield will lay on the bottom of the tub giving some clearance between the bulb and the plastic tub so that you do not melt the tub! On my Maytag unit, I had to remove the metal cage on the trouble light because it interfered with removal of the lower basket for charging it with bowls. Many dishwashers have enough space under the lower basket to place a complete trouble light, so watch for this when selecting a dishwasher to modify.

At this point you are almost finished. Examine your insulation that it covers the whole body. Insulation is important to keep up the temperature in the kiln. If there is no insulation or if it is skimpy, you can wrap it with Mylar insulation from a building supply or use polyester batting available at upholstery places or Fabricland or other quilt supply stores. Fiberglass batting would work well also if you have room for it.

The best place to locate the kiln is in a building, heated or unheated. If you keep it outdoors, it should be out of the wind and maybe you should consider a housing over it such as a plywood box. If you put it indoors the water vapours released will smell like green wood, so be aware of that before putting it in the living room!

Once you have done the above operations and located the kiln with proper protection from the elements, you are ready to plug it in and charge it with green wood rough turned bowls.

My kiln seems to work best when it is quite full. Put the bowls in upside down. You can put 2 layers of bowls on the lower rack staggering them to allow air movement and as many as possible in the top basket. It also will work with just 2 or 3 bowls if that is what you have. If you have tall items, you can remove the top basket.

Hints on use:

If the unit is full you can move the bowls around once a week to help them dry more evenly. Don't peek too often as you let the steam escape risking cracking the bowls. (However some peeking is OK to let a little steam out.)

Microwaving the bowls once or twice will warm up frozen wood, release some of the moisture and kill any insect larvae that might be in the wood. Cooking the wood too much is not advisable because it can harden the lignin bonding the wood fibers making the wood brittle. The setting for this varies by microwave. Many have a defrost setting. If you have this use it and set the weight for the weight of the bowl that you are drying. Otherwise, set the oven on medium or med-low and cook for 4 minutes per pound. You will have to experiment with your oven. Avoid too many checks in the end grain. An oven with a turntable is best also.

It is not good practise to add more green bowls to a batch that has been drying for a couple of weeks as this adds more moisture which will make the partially dry bowls pick up moisture from the wet bowls.

Generally it takes about 4 weeks to dry a batch of bowls. If the bowls are dripping wet and thick walled, it may take a week or 2 longer.

A probe type of thermometer could be inserted through a hole drilled near the top of the unit. With this thermometer, you can observe the inside temperature. When the bowls are wet the temperature might only be 60 degrees F. When the bowls are dry it will go up to 90 degrees.

A cheap light bulb lasts approximately 4 weeks. A long life will last 2-3 months. These bulbs will soon be taken off of the market so get yourself a good supply based on your anticipated usage of the kiln. Possibly condensation dripping on the hot bulb contributes to the short life.

There are other ways to heat a kiln such as using the heating element conveniently located in the bottom of the tub. Caution with this, it may be too hot and will require some kind of a control to operate it. Often the moisture released from the bowls is acidic depending on the wood species. Acid would shorten the life of a thermostatic switch exposed to this vapour.

Lastly, I have used this method exclusively to dry many bowls over the last 6 years and I am very pleased with the results. There has been a failure rate of less than 2%.

Happy Turning.