

Kiln Corner

Evaluating a Used Kiln

by Arnold Howard

Photography Courtesy of Paragon Industries, LP.

Though Arnold Howard works for Paragon Industries, L.P., the information here applies to all brands of glass kilns. Feel free to send questions for this column no matter what brand of kiln you own.

Let me offer you a tip for saving time and money when you are considering the purchase of a used kiln. Before driving a long distance to look at the kiln, ask the owner to e-mail you photos. This will help you decide if the kiln is worth looking at. Once you get there, you should check the following kiln parts carefully.

Inspecting the Elements

Take an ohmmeter with you so you can test the elements. Please disconnect the kiln from the power before testing them. Obtain the wiring diagram for the kiln you are looking at. The resistance of the elements should be within 10 percent of the ohms shown in the wiring diagram. The ohmmeter will also indicate whether an element is burned out.

While you have the switch box open to check the ohms, examine the switch box wires carefully with a flashlight. Signs of heat damage are loose push-on connectors, brittle wire insulation, and discolored components.

Use a dental mirror and flashlight to look at the elements. One of the signs that a heating element has been overfired is that the element coils will have begun to collapse, or lie flat, in the element grooves. Another sign of an overfire is vertical cracks and shrinkage of the firebricks.

Reddish-colored elements are worn out. As iron-chrome-aluminum elements age, the aluminum eventually wears away, leaving the iron. That causes the elements to look reddish. Are the elements bulging out of sidewall grooves? If the elements are not broken, you can heat them with a propane torch and press them back into the grooves.

Additional Considerations

An even more important thing to look at than the condition of the elements when buying a used kiln is the condition of the bricks—especially the lid or roof. One time someone brought a 30-year-old Paragon kiln to the factory for repair. The firebricks were in perfect condition, so I knew immediately that the kiln had been taken care of.

Also be sure to read the electrical data plate on the side of the kiln. The plate lists the electrical data as well as the kiln's maximum temperature, which will help you determine whether to buy the kiln. Ask if the wiring has been altered since the kiln was new. Sometimes a used kiln has been converted to a different voltage. A



You may get a good deal on a damaged used kiln. Melted glass in the kiln bottom is often not difficult to repair.



Before testing the elements with an ohmmeter, disconnect the kiln from the power.

used kiln that was converted to 208-volt operation may still have 240 volts listed on the data plate.

Will you need a new electric circuit for the kiln? If so, follow the specifications recommended by the kiln manufacturer. Look at the kiln's wiring diagram and the manufacturer's website listing for that particular kiln model. Don't necessarily depend on the cord plug as a guide, because someone may have replaced the original factory cord with one of lower amperage.



Arnold Howard writes instruction manuals and advertisements for Paragon Industries, L.P. His hobbies are glass fusing and karate. He also enjoys studying history and watching classic movies. You can reach Arnold at ahoward@paragonweb.com with questions for future columns. Sign up for his kiln newsletter at www.paragonweb.com.

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