

RE-PINNING & REPLACING ELEMENTS

Element Re-Pinning

Elements become very brittle after a few firings; so if re-shaping or re-pinning is necessary, heat the element either by turning on the kiln, or with a torch to a dull red glow. Unplug or unwire the kiln, and reposition the hot element using needle nose pliers. A brittle element normally will not break if it is above 500 degrees F.



As a kiln ages, the element will begin to bulge. At this time the number of pins will not help keep the element in the lid. Your best solution is to replace the element with a new element.



U-shaped pins are used to pin elements in the lid element troughs of the glass kilns.

Removal of Electrical Box

1. Unplug or unwire kiln if direct wired
2. Remove the screws attaching the electrical box to the heat shield
3. Pull the box away from the kiln. When removing the electrical box that contains the pyrometer or electronic controller, be careful to pull the box straight out so that the thermocouple does not break the brick.



NOTE: When doing replacement repairs, install the new part in the same position as the old part. Transfer wires one at a time from the old to the new part. Discolored wires and lugs must be replaced or cleaned with sandpaper or steel wool until clean and bright. If this is not done, a bad connection will result.

Replacing Elements

1. Turn off kiln and unplug or unwire if direct wired and remove all pins holding the defective element in the grooves.
2. Gently remove the old element taking care not to break or chip any bricks. Long needle nose pliers can help in this job.
3. Insert one twisted pigtail of the new element through the terminal brick and then work toward the other end by carefully placing the new element in the trough of the brick. Make a slight bend at each corner so that the element takes the shape of the kiln. When the entire element is in the trough, it may be necessary to slightly stretch or compress it to obtain the length necessary to allow the pigtail to pass through the brick.
4. Re-pin the element at each corner with Kanthal pins. **The pins should hold the element down while the lip of the element groove holds the element in.**



- Reinstall the porcelain insulators over the twisted pigtail.
- Pull the pigtail out gently until it is tight, then clip it 5/16 inch beyond the insulator.

Hi Temp Connectors



- Place a high temperature connector in the jaws of the crimping tool and hold it lightly. Reach inside the kiln with the other hand and push the pigtail out. Slip the connector on the pigtail and crimp firmly in two spots.



Crimping Tool

- Strip 5/16 inch from the wires connecting the switch or relay to the elements. Polish with fine sandpaper if the wires are discolored, then firmly re-crimp.

It is important to stress that the wire in a crimped connection be clean and bright. All crimps must be firmly applied.



Element Replacement – Tips for Electric Rakus – TopHats

The best way to replace elements in an electric raku kiln is to remove the firing chamber from the frame. Once the firing chamber has been removed from the frame, loosen the stainless steel band, remove the top from the firing chamber and follow the steps for element replacement. After the elements have been installed, replace the lid of kiln on the firing chamber and reinstall the firing chamber to the kiln frame.



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