

Denver Glass Machinery

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Kiln element replacement

The replacement of the elements in all Denver kilns is can be done in the same manner. It is easiest, especially on the larger units, if you have two people. Some preparations will help in making the job easier.

Here are some things that you should have ready:

- An area large enough to lay the element rack once it has been removed from the kiln.
- A straight screwdriver
- A pair of pliers
- A 5/16" nutdriver or wrench
- A 7/16" nutdriver or wrench
- A pair of wire nippers
- Some patience...(always a virtue)

Then:

- Disconnect all power to the kiln.
- With the 5/16" wrench, remove the screws from the electrical cover on the lid and lay the cover to the side to expose the electrical connections to the elements.
- Label the wires so that they go back where they were
- Disconnect the wires from the elements using the screwdriver and pliers. (On some of the older models there was a crimping system used. These crimps should be replaced with copper clamp type lugs.)
- Now you can lay the electrical cover completely out of the way
- Open the kiln lid and from the top, start removing the 7/16" nuts that hold the rack in place. Be very careful not to let it fall into the kiln. (It probably won't, but you should be aware of it.) Gently lower the rack from the lid being careful not to twist, torque or let it spread such that the mullite tubes would fall. Lay it down in the area that you made to work.
- Remove all ceramic insulators from the lid.
- Slide the steel rack off of the end where the element tails go through the lid and remove the failed coil(s).
- Re-install the new coil(s). You may need to adjust the stretch of the element a little bit.
- Slide the steel rack back into place making sure that element tails are all to the top side of the rack.
- Gently carry the rack back to the kiln and start the element tails and the rack legs back up through the holes. (This is the hardest part).
- Secure one leg on each end of the rack to hold it in place you replace the ceramic insulators. Pack some ceramic fiber blanket down into the tubes around the rack legs to stop *any* chimney effect from coming through the lid.
- Replace all securing nuts and washers. Redo all electrical connections and replace cover.
- Reconnect electricity and test for proper connections.