



# CLAYMAN

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## PRODUCT INFORMATION

### ADVICE NOTES ON CHANGING ELECTRIC KILN ELEMENTS

(This advice specifically relates to Kilns & Furnaces Kilns)

1. Elements in Kilns & Furnaces kilns are numbered. In top-loading kilns from the top down. One element is made of a length of coils, a straight length of wire, known as the hairpin, and another length of coils. At the end of each length of coils there is a straight length of twisted wire known as the element tail.
2. Before attempting to change any elements switch off the power at the mains isolator.
3. Remove the switch housing, the rectangular metal box below the hinge at the back or side of top-loading kilns. On front-loading kilns it is normally the back plate. If element are fitted in the door there will be a terminal housing incorporated in the door.
4. You will see the element tails protruding through the kiln wall. They are connected into terminal wires in small brass connectors. The heat may have tarnished these.
5. Working from the top down, loosen the screw in the brass connectors. Remove the element tails and push through the wall.
6. The elements are held in the grooves by means of element pins (top-loaders), small bent pieces of high temperature wire (kanthal wire). Carefully remove the pins from the elements and save.
7. Remove the entire element from the grooves. If there are any pot shards or other debris in the grooves remove this as well. Vacuuming can do this. If there are any black marks on the brickwork or glaze specks these should also be removed. Sometimes this will require "digging" out with the end of a screwdriver. Any serious damage to the brickwork should be repaired before proceeding. If repairs are made it is important that kiln cement is not applied to areas where the elements "sit". Silica in refractory cements will attack the element wire when hot and can cause premature failure of elements!
8. Carefully feed the element into the groove, pushing the tails through the holes in the wall.
9. At similar points to the old element slightly stretch the element by pulling the coils apart (top-loaders only). When the element is fully fitted pin the element at these points, taking care not to bridge the coils. The element should push back into the groove. Elements are not pinned in front-loaders. Occasionally the hairpin in front-loading kilns maybe pinned.
10. Pull the tail firmly through the wall into the terminal housing, ensuring that the porcelain insulator is located correctly to prevent the element tail touching the metal casing of the kiln. If you have ceramic fibre paper available cut a small square and impale on the element tail. Replace the brass connector with a new one and put the terminal wiring back in place. Firmly screw the connector screws down to clamp all wires without breaking any of the wires.



11. Repeat this process until all elements have been changed.
12. When all elements have been replaced carefully snip the element tails as they protrude from the connectors with wire clippers or pliers.
13. Replace terminal housing and switch on at isolator.
14. The elements may buzz when first switched on, but should settle in use. Check for arcing in the terminal housing. If this is observed remake any connection where this occurs.

## GENERAL NOTES

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Remove one element at a time to change.

Work from the top down to ensure debris does not fall into the element grooves during servicing.

Check after a few firings that elements are not starting to creep from the grooves. If this is happening carefully stretch the element to make it press back into the groove. Take extreme care with this process as elements will become brittle with firing and can snap easily.

We strongly recommend that only original manufacturers spares be used on any kiln.

In case of doubts call Clayman on 01243 265845