FITTING OF ELEMENTS

Please note, as this is electrical work, it must be performed by a licensed electrician.

Make sure the kiln is disconnected from power – unplugged from wall socket, fuses out or isolator off, whichever applies.

Remove cover(s) from kiln to enable you to have access to element terminals. Undo brass nuts on terminator remove end of old element from terminal, cut though old element at the point where it comes out of the ceramic insulating tube, remove any residual insulating fibre from the opening of the ceramic insulating tubes and then slide ceramic insulating tube outwards from the outside of the kiln wall - do this on both ends of each element. Then from inside the kiln carefully remove the element from channel, being gentle so as not to damage brickwork.

If element has blown out and there is molten metal embedded in brickwork make sure all of metal is removed by digging out with a screwdriver or something similar. Make sure element channels are spotlessly clean before installing new elements (vacuuming is recommended).

Install new elements in channels feeding tails through holes in the brick wall into termination areas. Slide the ceramic insulating tubes back on to the element tails, push insulating material back into tube, and terminate each end of the element around brass screw, making sure all washers are replaced. Cut off any excess length of element tail as pictured, and make sure that the cut-off end of the element does not come back in contact with itself or another element wire, the casing or the cover as per diagram.

Tighten terminal nuts and test fire kiln.

FITTING ELEMENT PINS

1. Drill hole by hand using a drill bit (smaller than ceramic pin, say around 5 mm) hold drill bit between fingers and rotate.
2. Drill into the brick at the corner of the kiln in the back of the groove, the hole should be on a slight downwards angle.
3. If element is not sitting at the bottom of the groove then wedge down with a small section of wood or similar, do not forget to remove before firing.
4. Drill in approximately 25 to 35 mm deep.
5. Put pin into hole and very gently tap in with a piece of wood or soft hammer.

6. It does not matter if the ceramic protrudes out the front of the brick.
7. Do not remove the ceramic pin after installation.
8. Pins should be left in to keep element from jumping out of the corner.

Note:
If your elements have been fired they will be brittle and probably break, **we recommend this operation be done by a qualified kiln technician,** during the above operation. If elements have turned brittle the only way to get them down or back into groove is to use gas torch and heat then red hot and manually put them in position.

RESISTANCE TO CHEMICALS

Reducing gases with a sulphur content reduce the life of your kiln's electric elements, and a kiln atmosphere containing halogens (such as fluorine and chlorine) are highly detrimental to electric elements.

FIRST FIRING OF ELEMENTS

It is recommended that the first firing of a new kiln's elements is a slow firing, with the kiln empty, to a temperature of 1050°C. The cycle is outlined below, and is also referred to as a pre-oxidisation or re-oxidisation cycle.

- Do not fit ceramic close off bungs to vent holes during dry out firing.
- You should heat up to 1050°C with a ramp up time of seven (7) hours, (roughly 150°C per hour)
- Hold at 1050°C for four (4) hours
- Turn off the elements and allow to cool with the door closed until the furnace is below 200°C

The elements will now be oxidized and ready for use, and added benefit is this will enable the cement to mature/dry and to remove moisture from the brickwork

(Revised 2019)