

## CHANGING A KILN ELEMENT

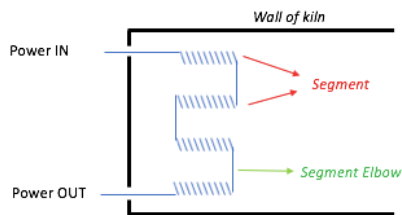
### SAFETY

Under no circumstances should you attempt to remove the terminal cover of the kiln without first ensuring the kiln is isolated from all power by either removing the plug from the power point, or if there is no plug, then ensuring the isolator switch and the corresponding circuit breaker is in the "OFF" position.

#### STEPS:

- All spare elements are supplied already stretched with segment elbows in place.
- Your kiln element normally consists of several rows of coils. These rows run back and forth across the wall of your kiln (or back wall or door depending on the size of your kiln). Do not be mistaken that each row is an element.
- Each element (normally) has a "power IN" and a "power OUT" (the tails) and both these you will find come through the back wall of you kiln. (See Fig 1.)

Fig 1.



- Remove the terminal cover that covers the electrical connections. This will be on the side of our top load kilns, or the back of our front load kilns.
- Before disconnecting any wiring, mark all wiring and take photos (this will help if you forget how it was originally connected).
- Disconnect the wires from the element tails in the terminal case and remove the old elements. Old elements tend to be brittle and will break easily. They will be pinned in places, so remove the old pins with a pair of pliers. Be careful in removing the old elements to prevent mechanical damage to grooves in the bricks – the bricks are very fragile.
- Place the new element gently into the grooves to assess the fit – the element must be "seated" well into the groove – this may require removing the element during the fitting process to stretch it a bit more – make sure you stretch along the length of a segment to get and even stretch over the segment length. Sometimes you may need to squeeze the element coils closer together if the element is too long. There should be a smaller vertical groove in the brick between each large horizontal groove, this is where you will fit the segment elbow.
- Once you are happy with the fit of the elements in the grooves, you can use the pins supplied to pin the element in position. Generally, 5-6 pins are used per segment. Use a pair of pliers to hold the pins firmly and then push them into position – avoid using the previous element pin positions.

**NOTE – Elements are manufactured to ensure the correct amperage. They should never be cut and should be used as supplied.**

- You now will push the element tails through the kiln wall where they will be connected to the power in the terminal case.
- The Element tails are to be connected to the electrical power, this can be done either by way of a Line Tap connection or a Bolt connection. If using a Bolt connection create a loop at the

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end of the element tail for the bolt to go through and connect as reflected below. (see diagram below).



**All connection should be as tight as possible to prevent a “Hot Joint” that can impact the performance of your kiln.**

- Cut off the excess element tail so that the tail protruding from the line tap or bolt is the same length as the old element tail.
- Check all wiring to ensure that it is connected correctly and compare this with what you originally had in your kiln.
- Check that you have no exposed wiring and ensure that no wiring is touching the frame or steelwork of your kiln.
- You should now have fitted your element correctly.
- Finally, you should fire your kiln empty to 1100c at a ramp rate of 120c/hr and soak at 1100c for 2 hours to build up a layer of protective oxide on the element.

**Fired Up Kilns take no responsibility for the incorrect fitting of kiln elements, nor for any damage or injury that may occur as a result.**

**If you do not feel confident in fitting an element we strongly recommend that you engage a kiln technician to change your kiln element.**