



## Element Replacement C1228, C122012 and C2121

### Installing elements into element plates:

**WARNING:** use safety glasses while doing the following procedure:

1. Stretch element to 17 ½ feet (coil to coil, not including leads).
2. Arrange one large plate (12" X 9") and one half large plates (6" X 9") so that the half plate simply extends the large plate making a longer plate. You must fit them together so that ridges which are indented at left are not indented on the right edge, and ridges which are flush on the left edge will be indented at the right edge.
3. Beginning from the edge which has five indented ridges, slide the two element leads into the middle grooves on each side of the middle ridge. Pull element through until the middle point of the element bends snugly around the indented ridge. This is important so that the element coil sits on the refractory plate and does not protrude outside of the plate.
4. At the end of each groove, pull on the element to tighten it and put tension on the coil stretching it about an inch. As you are pulling, insert a screwdriver with a ¼ inch flat blade between coils and wedge the blade against the end of the indented ridge. This will hold the element in place as you feed the next groove. **WARNING: do not let go of the screwdriver because the tension on the coil might cause it to fly out.**
5. Repeat item 4 until all grooves of plates are filled.
6. In the last rows, insert screwdriver into loop on element lead end and pull, stretching element until all of the element lead extends outside of the plate.
7. Remove loop from element lead.

### Installing element into the furnace:

Element should already be installed in porcelain plates.

1. Turn off power.
2. Remove screws and rear cover (s).
3. Remove harness wires from elements (3/8" nut) and tag as to location
4. Untwist element wires from bolts.
5. Cut old element flush with porcelain bushings.
6. Unscrew and remove porcelain bushings (Bob bushings).
7. Open door of furnace and remove old element with porcelain plate pull straight out gently.
8. To insert new element plates into chamber push plates back as far as they will go. Align element leads with holes at rear of chamber. (Leads need to go through hole on back of chamber).
9. Install porcelain bushings over element leads and secure.
10. Twist element lead around bolt 2 turns. Cut off excess.
11. Replace the 14 gage wires on the bolts/element.
12. Install nuts on bolts and tighten securely.
13. Check all wiring before putting on cover (s).
14. Test furnace with an ohm meter for shorts.

### Element break in for models C1228, C122012 and C2121 upper chamber only

Furnace should be fired empty to at least 2000°F and held for 1 hour soak time. This process oxidizes the elements to help protect them and increase element life.

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