

# Installation Instructions

## *Moldatherm Upper Heating Element Assembly Replacement Instructions*

HTF55000 Series
Revision Date: May 21, 2014

A level work surface as large as the furnace when opened like a book is needed. Retain all hardware for reassembly.

1. Shut off power at the main power circuit leading to the control console.
2. Remove the process tube and tube adapters from the furnace.
3. Close the furnace lid, latch and tilt the furnace forward. Remove the two L-shaped lid support legs. Position furnace down on the feet.
4. Remove the UPPER furnace end caps from EACH end of the furnace, for a total of four. Two screws and two washers per cap.
5. Remove the top perforated panel from the UPPER furnace.
6. Remove the back top and front top cover panels. Two screws per EACH end of each panel. Pivot the side panels out from under the center end covers. It is NOT necessary to remove the center end covers.
7. Diagram the heater and thermocouple wire connections and label wires as needed to assure correct reconnection.
8. Disconnect heater and thermocouple wires from terminals. Remove thermocouple assembly from top aluminum panel.
9. While holding the bottom half secure, carefully open the furnace top and hinge fully open until the furnace is in an 'open book' form.
10. Remove the end brackets of the UPPER heating unit. Remove the bracket retaining screw by entering the large round hole on EACH end of the UPPER furnace frame. Two screws per end.
11. On the outer (accessible) side of the UPPER furnace, find the ROUND HEAD screws and turn CLOCKWISE. Turning these screws will loosen a pressure plate used to hold the heater in place.
12. On the outer side of the UPPER furnace aluminum heater shell, completely remove the vertical channel-shaped brackets. There are two screws into the aluminum and two screws into the frame for EACH bracket.
13. Remove the aluminum SIDE shell from the frame.
14. Note the heater face sealing ridges and terminal locations with relationship to the furnace frame and aluminum shell.
15. Pull the heater toward the outer side of the UPPER furnace, and then lift heater to remove from the aluminum shell. Place the used heater in plastic bag and dispose of properly.
16. Properly orient and lay new UPPER heater on top of the LOWER heater and check for any gaps where the heater halves seal together. If gaps of more than 1/16" are noted, the NEW UPPER heater can be rubbed END TO END to 'sand' the sealing surfaces to make a better fit.

17. With a good heater seal surface, position and center the new heater into the aluminum shell. Push in and down to make contact with the pressure plates inside of the aluminum shell.
18. Reinstall the aluminum SIDE shell and vertical channel-shaped brackets, which were removed in steps 12 and 13.
19. Reinstall the end brackets that were removed in step 10.
20. Carefully close the UPPER half of the furnace while watching the heater seal surface alignment.
21. Adjust the ROUND HEAD screws on the sides and top of the UPPER aluminum shell to align the heater seal surfaces.
22. Make access for the thermocouple probe. Use a 7/32" drill bit with FINGERTIPS ONLY and 'drill' through the thermocouple probe holes in the top aluminum shell, into the UPPER heater. Watch the hole location to position the hole between heater coils.
23. Reinstall the thermocouple assembly.
24. Reinstall the thermocouple lead and heater wires per diagram made in step 7.
25. Reinstall the back top and front top cover panels. Two screws per EACH end of each panel. Be sure the side panels are under the center end covers.
26. Reinstall the top perforated panel onto the UPPER furnace.
27. Reinstall the UPPER furnace end caps onto EACH end of the furnace, for a total of four. Two screws and two washers per cap.
28. Latch the furnace closed and tilt the furnace forward. Reinstall the two L-shaped lid support legs. Position the furnace down on the feet.
29. Reinstall the process tube and tube adapters into the furnace.
30. Connect power at the main power circuit leading to the control console.
31. Operate the furnace to the following temperatures to check the heater operation and to rigidize the new heater assembly: 550°C for one hour, then 1000°C for two hours.

Contact factory service technicians at 1-800-438-4851 with your questions.