

1.0 SCOPE

- 1.1 Instructions for the installation of Chamber and Baffle assembly on an existing furnace.
- 1.2 See TEC-231a for Chamber Removal instructions.

2.0 EQUIPMENT AFFECTED

- 2.1 IR belt furnaces manufactured by RTC from 2000-05.
- 2.2 Inlet baffle, heating chambers, transition tunnel and cooling section.

3.0 REFERENCES

TEC-231a CHAMBER REMOVAL
TEC 243a INSTALLING A TRANSPORT BELT
TEC 250 IR LAMP EMITTER REPLACEMENT



LA-310 Front View

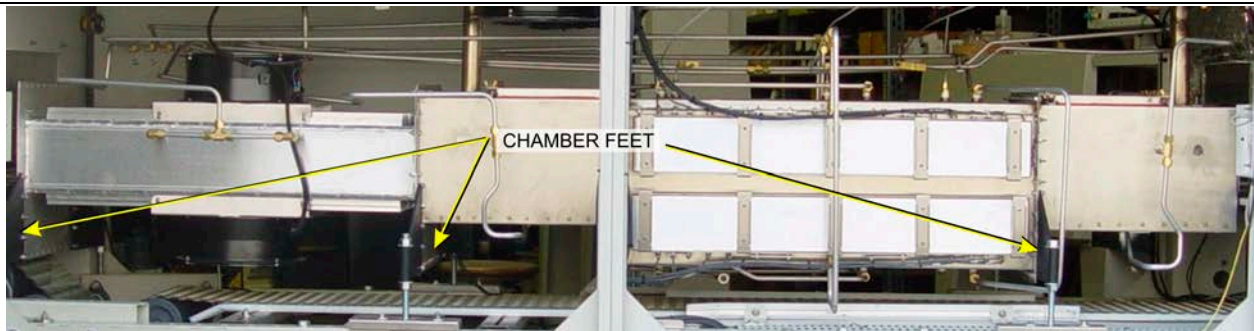
4.0 PROCEDURE

4.1 Move new Chamber to Location

- 4.1.1 Remove all sides and top of the crate. Leave on skid for convenience.
- 4.1.2 Locate new chamber assembly next the old furnace chamber assembly.

4.2 Chamber Preparation

- 4.2.1 Remove (4) chamber feet from old chamber and mount in the same location on the new chamber.



Install chamber and cooling section feet

- 4.2.2 Install remove gas fittings from old chamber and reinstall on new chamber making sure to use Teflon tape on all pipe threads.

- 4.2.3 Remove air rake fittings and nuts from old baffle section and reinstall on new baffle (see figures below).



Air Rake fitting with Nut and Shown Assembled



Air Rake fitting from inside



Air Rake fitting from outside

4.2.4 Make sure all components are fastened securely including the chamber feet.

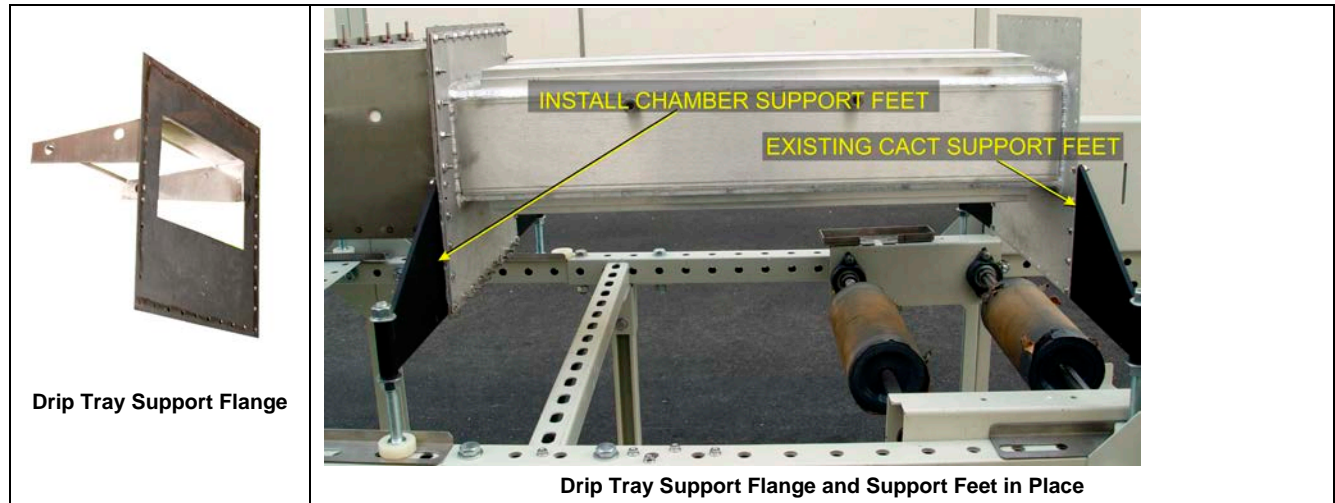
4.2.5 Reinstall air rake gas fittings into the baffles.

4.3 Drip Trays

4.3.1 When installing a new heating chamber you must install the transition tunnel drip tray support in between the cooling and heating sections and install the entrance drip tray support in the entrance.



Air Rake Fittings installed on new transition tunnel



4.3.2 Apply seal tape around transition tunnel flange. Do not block flange holes with the seal tape.

4.3.3 Insert drip tray in the opening of the transition tunnel.

4.4 Chamber Cooling Section Assembly

4.4.1 Position the existing cooling section in line with new transition tunnel flange and line up the flange holes.

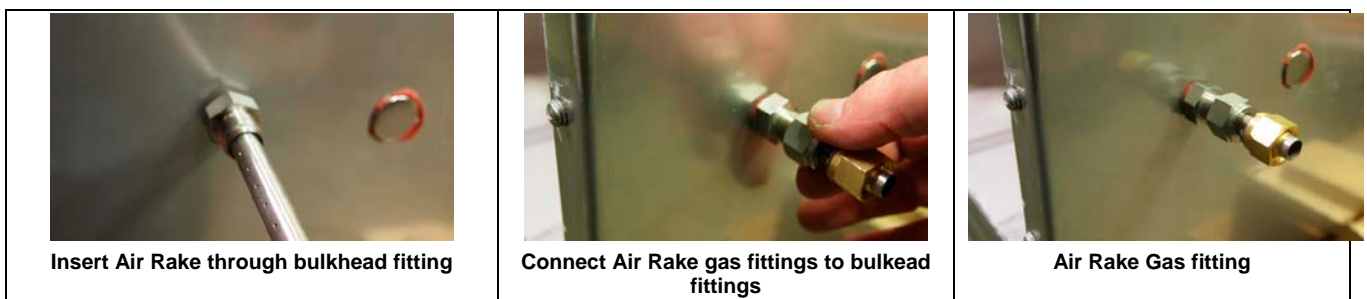
4.4.2 Install all fasteners and cooling section support feet.

4.5 Install new Air Rakes

4.5.1 Guide new air rakes through the holes in the drip tray.

4.5.2 Install cap on the one end and tube nut on the other side as in the figures below.

4.5.3 Install the old Air Rake gas fitting onto the new Air Rake



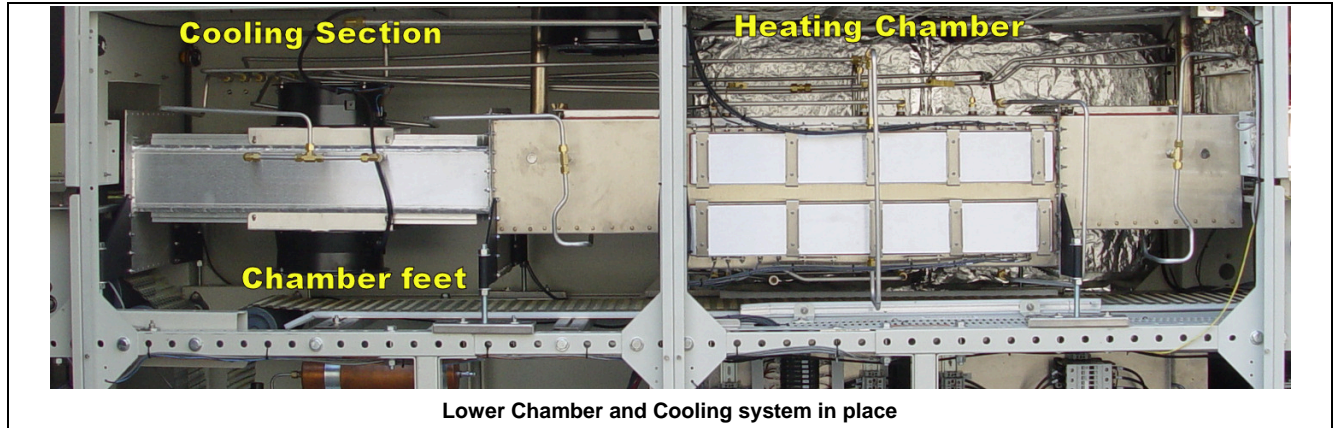
Insert Air Rake through bulkhead fitting

Connect Air Rake gas fittings to bulkead fittings

Air Rake Gas fitting

4.6 Chamber Installation

4.6.1 Lift entire heating chamber and cooling section assembly into place inside the furnace.



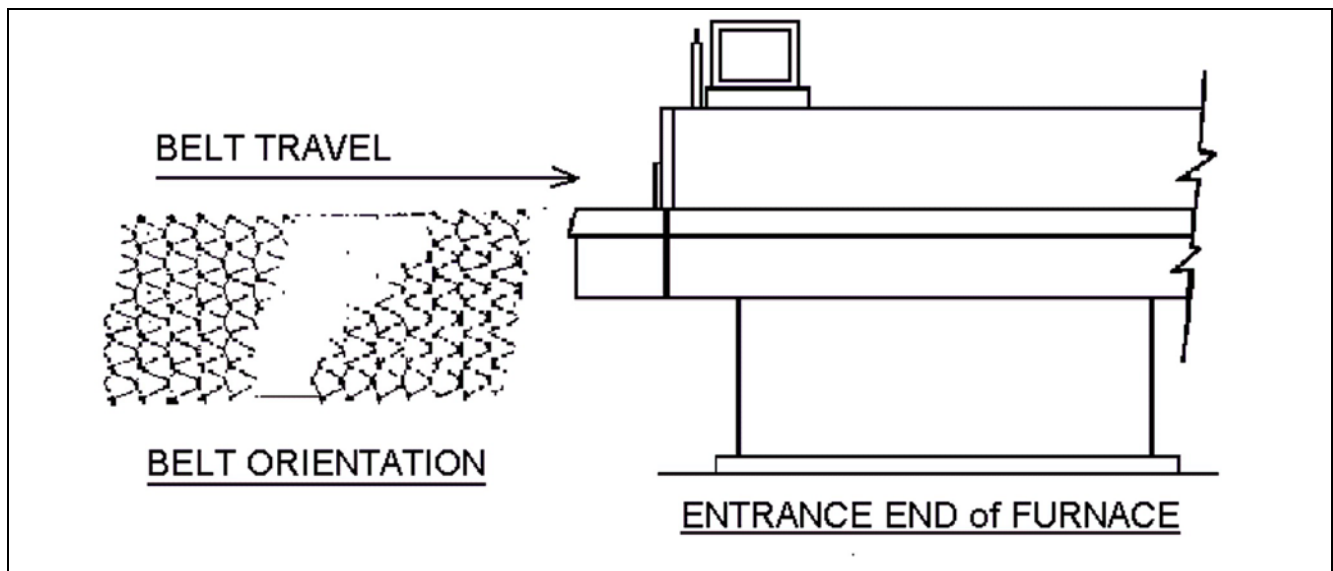
4.6.2 Attach gas lines to chamber fittings.

4.6.3 Attached exhaust tubes to baffles with supplied sealing tape and screws.

4.6.4 Attach gas lines to Air Rake gas fittings.

4.7 Belt Installation (refer to TEC-243a for belt handling details)

4.7.1 Place the rolled up belt ant the entrance end of the furnace and orient as shown in the figures below. Make sure the belt weave orientation is per the figure below and on the next page (Belt Weave Orientation and Direction of Travel Detail)

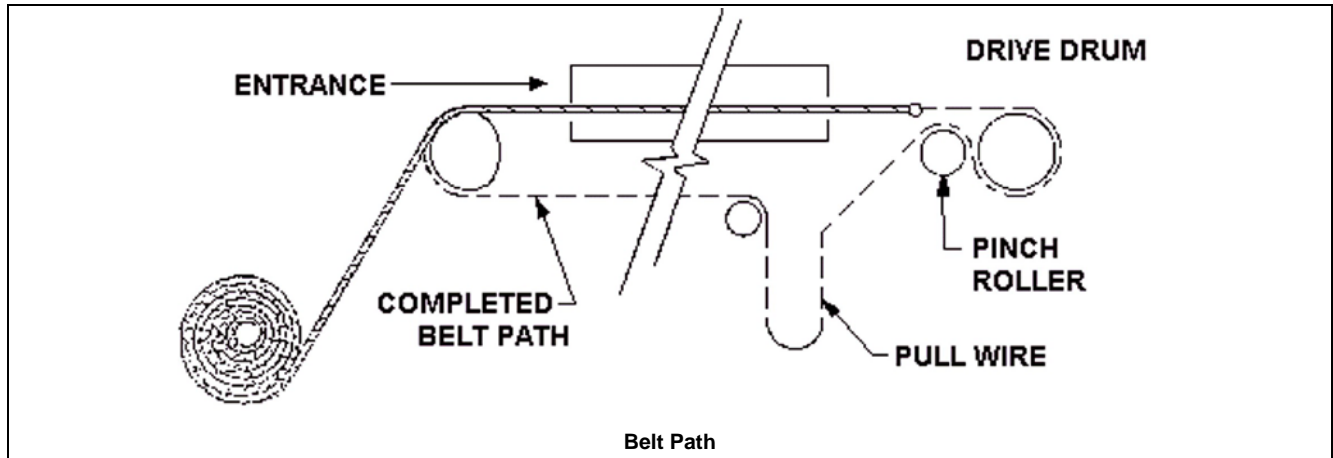


4.7.2 Extend a stiff wire through the chamber from the entrance to the exit, being careful not to damage the insulation.

4.7.3 Attach the wire to the belt and pull belt from the exit end while an assistant unrolls and guides the belt into the furnace.

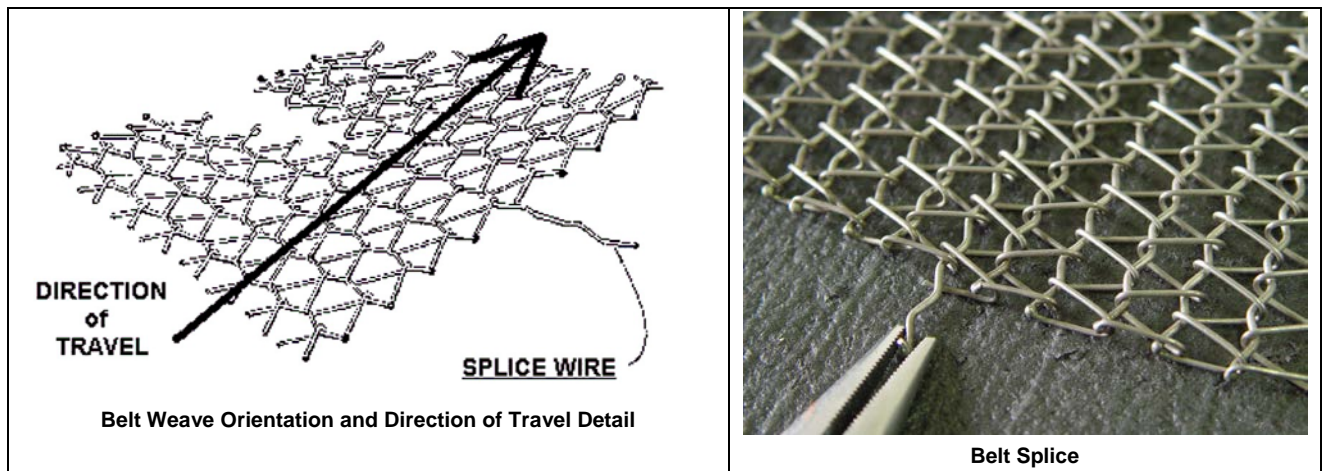
4.7.4 When the belt has been pulled through the furnace chamber, remove the rod and thread a pull wire through rollers and drive drum as shown below.

4.7.5 Attach the wire to the leading edge of the belt and pull the belt through.



4.7.6 Continue pulling the belt through the drive system using the wire, and then by hand the rest of the way until the belt path is complete.

4.7.7 Line up ends of the belt so they are slightly overlapping. Splice the two ends of the belt together by inserting the a new rod supplied with the new belt across the width of the belt as shown in the figures below.



4.7.8 The rods should be even and parallel and aligned with the belt edges. The cross-section wire will stay in place without any finishing at either end.

4.8 Lamp Installation

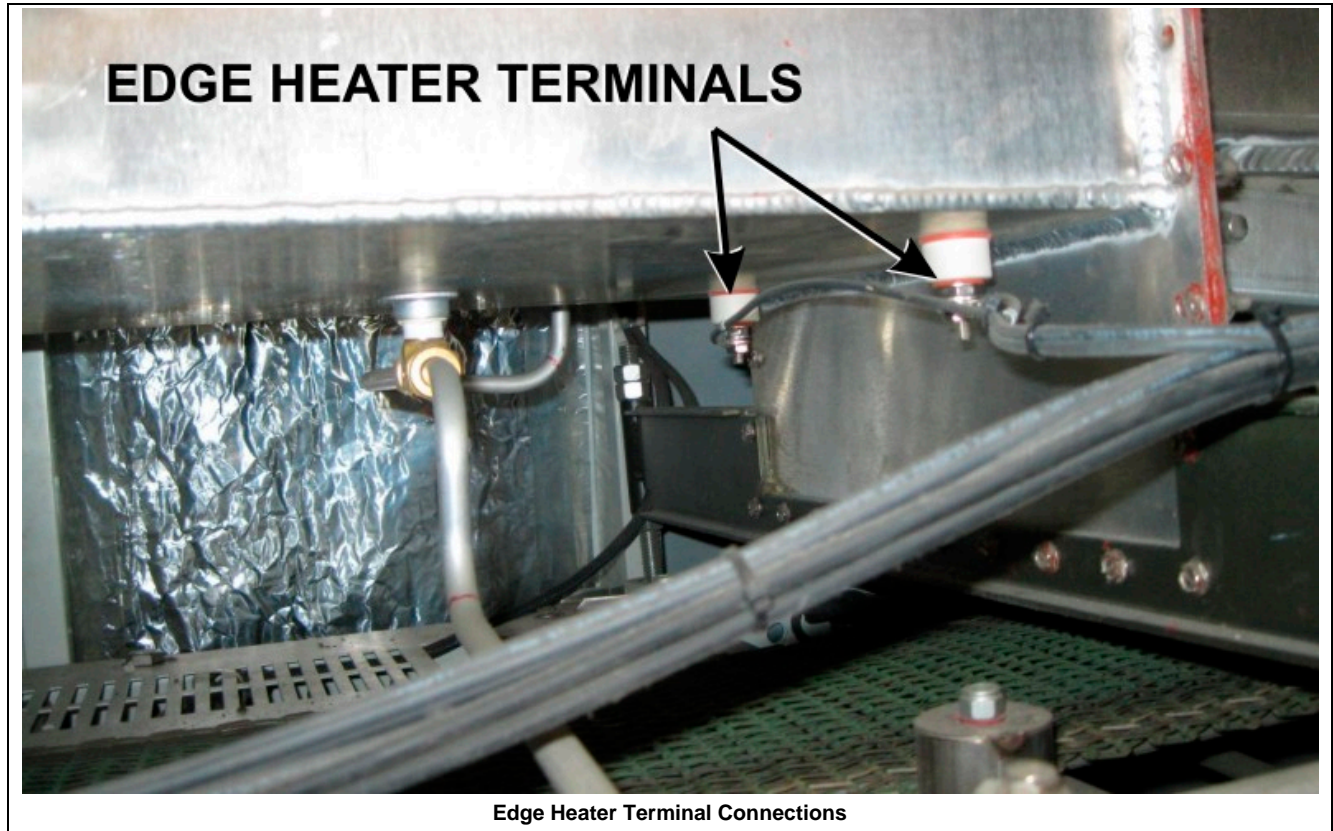
4.8.1 Install IR Lamps into chamber (see Doc TEC-250).

4.8.2 Install lamp feed wires and bus bars in same manner as taken off the old chamber (refer to photos taken). Take care when installing bus bars, the top lamps on the chamber has a flange close to the fasteners.

4.8.3 Reinstall plenum box covers and clips.

4.9 Connect Edge Heater Wires

4.9.1 Attach the (4) edge heater wires to terminals under the entrance baffle and transition tunnel as shown in the figure below.

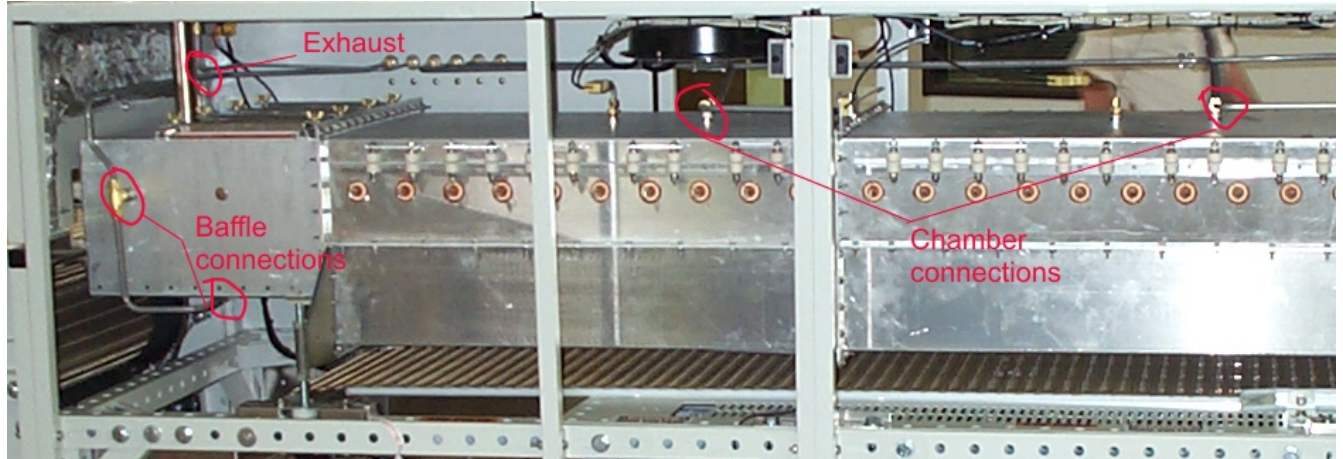


4.10 Reinstall All Wire Ducts and Fan Wires

4.10.1 Install ducts and wires that were taken off during disassembly, attach any needed tie wraps to the wire assemblies. attach wires to the fans.



4.11 Connect Thermocouples and Gas Lines



4.11.1 Install any other gas lines and attach thermocouple wires.

4.11.2 Make sure all lines that were taken off during disassembly are reinstalled.

4.11.3 Install belt weight in its proper place.

4.12 Replace Top Covers

4.12.1 Attach any upright beams that were taken off lift top covers back onto frame.

4.12.2 Turn the top cover that contains the keyboard and carefully lower it back on the frame and over the exhaust stack.

4.12.3 Install computer cables that were taken off, install monitor and plug in all cables.

4.12.4 Check for any loose components and wires making sure that all are secure.

4.12.5 After installing main gas line turn on the gas.

4.13 Replace Side Panels

4.13.1 Reinstall side covers and any other cover that was taken off during disassembly.

4.14 Turn On Utilities

4.14.1 Open process gas valves. Check for leaks. Verify tension reservoir pressure gage is at 15 psi.

4.14.2 Check that all EMO and interlock switches in correct position

4.14.3 Turn facility power on.

4.14.4 Start furnace.