DryRod®

The LOVE16B Controller is used in the following Phoenix DryRod® ovens and repair kits:
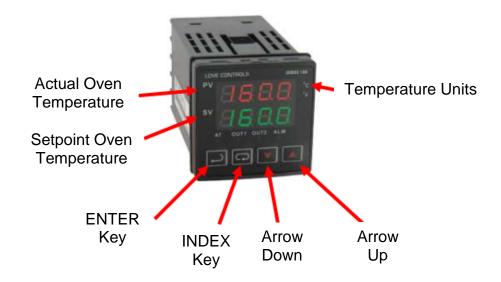
Type 40HT Electrode Rebaking Oven – PN 1204400, 1204402
Type 750HT Flux Rebaking Oven – PN 1201801, 1201802
Type 400BT Electrode Rebaking Oven – PN 1204800, 1204805, 1204806
Type 750HT Controller Repair Kit – PN 1257110
Type 40HT Controller Repair Kit – PN 1250205

Actual Oven Temperature
Setpoint Oven Temperature
Temperature Units
ENTER Key
INDEX Key
Arrow Down
Arrow Up

CHANGING UNITS OF TEMPERATURE:

From home display, press and hold ENTER key for 3 seconds. Press the INDEX key once to display tPUn. When tPUn is displayed, use arrows to switch between °C and °F. Once desired units are displayed, press ENTER key to activate. Press ENTER key once again to return to main display.

PREPARING THE OVEN FOR A RAMP/SOAK PROFILE:

Press and hold ENTER key for 3 seconds to access Initial Setting Mode.
Press INDEX key four times to display CtrL.
When CtrL is displayed, use arrows to display ProG.
Once ProG is displayed, press ENTER key once.

NOTE: To return to manual mode, press and hold ENTER key for 3 seconds to access Initial Setting Mode.
Press INDEX key four times to display CtrL.
When CtrL is displayed, use arrows to display maNu.
Once maNu is displayed, press ENTER key once.

TO CONTINUE PROGRAMMING:

Press INDEX key to edit a pattern.

Use arrows to select pattern #. If "0" is selected you are modifying pattern #0. If you wish to modify additional patterns, use arrows to display desired pattern (0,1,2,3,4,5,6,7). Press ENTER key once desired pattern is displayed. For initial programming, use pattern 0.

NOTE: Ramp/Soak Profiles are controlled by setting a temperature and a time for different intervals within a profile. The interval is programmed by entering a target temperature and a corresponding time to reach/maintain that temperature. Time is in units (hh.mm).

Press INDEX key once to begin programming. Display will read SP00. This can be modified with arrows to program the desired temperature setpoint for the first interval.

Press ENTER key to confirm desired setpoint and press INDEX key once.

Display will show Ti00. This can be modified with arrows to program **the desired time to reach or to hold** the set temperature. Once the temperature is modified, press ENTER key to confirm the desired setpoint then press INDEX key once.

Display will move to SP01. This is the temperature setpoint for the 2nd interval. Repeat above steps to program temperature and time.

Up to 8 intervals can be programmed. It is not necessary to program all intervals. Once complete, press ENTER key to return to main screen.

INITIATING PROGRAMMING:

To change patterns while in ProG mode, status must be sent to PStP. From the main screen, press INDEX key to display r-S. Use arrows to adjust to display PStP. After PStP is displayed, press ENTER key twice to return to main screen. From main screen, press INDEX key to display Ptrn. Use arrows to select desired pattern. Press ENTER key twice to confirm.

From main screen, press INDEX key until display reads r-S. Once display shows r-S, press arrows to reach rUn. Press ENTER key when rUn is displayed. Press ENTER key again to return to main screen.

To adjust a previously entered program from the main screen, press and hold ENTER key for 3 seconds. Press INDEX key until the display reads the desired setpoint to modify. For example: SP00, Ti00 or SP03.

During ramp/soak program control, the default display indicates the current temperature of the oven. Below, the unit can be set to indicate the Set Point Value of the oven at its current interval or the Residual Time in the interval. To switch from Set Point Value to Residual Time, use arrows and press ENTER key.

RESET FACTORY DEFAULT SETTINGS:

Note: Resetting Factory Default Settings erases all values entered by the user. Record any necessary settings before proceeding.

Press INDEX key while at the home display until the controller reads LoC.

Use the UP arrow to select LoC1. Press ENTER key once to save this value.

Press and hold the UP and DOWN arrows at the same time for one second. Upon releasing the keys, the display will read SHou in the PV display and oFF in the SV display.

Press INDEX key once and controller will read PASS in the PV display and a 4321 in the SV display. Adjust the value in the SV display to 1357 using the UP and DOWN arrows. Press ENTER key to save the value.

Turn oven off. Upon turning oven back on, all of the user set values have been erased. At this time, the controller should be reset for use with a J-Type Thermocouple.

Press and hold ENTER key for three seconds. inPT will be displayed. Once it is displayed, use arrow keys to select J for thermocouple type. Press ENTER key to confirm change.

1. From main display, press and hold ENTER key for at least 3 seconds to enter Initial Settings Menu.

2. Advance through the menu by pressing the INDEX key four times. CtrL parameter should be displayed. Use the arrows to select PID. When PID is displayed, press ENTER key.

3. Press INDEX key once to S-HC parameter. Confirm HEAT is displayed. If displayed, press ENTER key to return to main display.

4. At main display, use arrows to move to the setpoint of primary use. Press ENTER key when the proper setpoint is displayed. You will return to main display.

5. At main display, press INDEX key to display r-S parameter. Use arrows to select RUN and press ENTER key. Press ENTER key again to return to main display.

6. At main display, press ENTER key to reach Regulation Menu. The first parameter is AT. Use arrows to select ON. Press ENTER key to save the setting. Press ENTER key again to return to main display.

7. Small green light should be blinking on main display. This indicates the Autotune is running. DO NOT make any changes while Autotune is running! This process may take 2-4 hours to complete. Process is complete when the blinking green light disappears. NOTE: Controller may overshoot setpoint during the Autotune process. This is part of the Autotune process.

8. After completion of the Autotune process, the controller is programmed to reach this setpoint properly and will not overshoot in the future.