1.0   SCOPE

1.1   Instructions for calibrating the conveyor belt on an RTC Radiant Technology, GreenBridge Technology, or LCI infrared furnace.

2.0   TOOLS REQUIRED

2.1   Tape Measure

2.2   Stop Watch

2.3   Small Object to ride on belt

3.0   PROCEDURE

3.1   The belt speed is calibrated by first placing the furnace in the calibrate mode and after measuring the amount of time it takes for an object to travel from the entrance of the furnace to the exit, the speed is calculated and entered on the calibration screen.

$$\textbf{Belt speed = distance / time}$$

$$\textbf{s = d / t}$$

4.0   DISTANCE MEASUREMENT

4.1   Note the belt speed units on the process screen (in/min, cm/min or mm/min). Measure the distance from the face of the inlet to the outlet of the furnace in the distance units shown on the process screen for belt speed (inches, centimeters or millimeters).
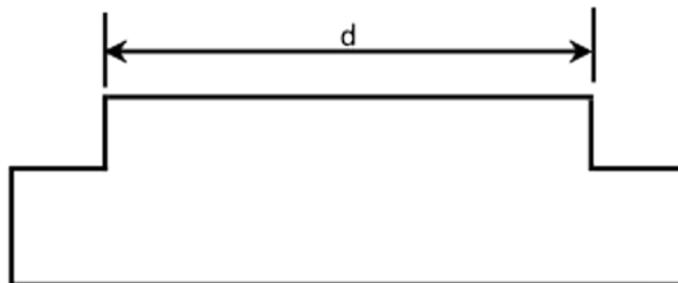
$$\textbf{Example: distance s = 315 ¼ inches}$$

$$\textbf{s = 315.25 inches}$$
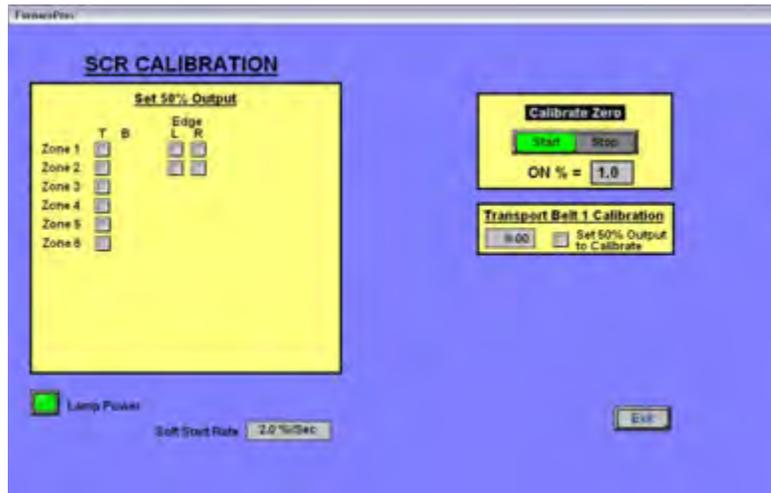
5.0   FURNACE CALIBRATION SCREEN

5.1   Start furnace normally.

5.2   In the furnace software, access the Calibration screen as follows:

1.   To access the Calibration Screen, go the **Maintenance** Screen.

2.   Click on the **Calibrate** button:

3. The following pop-up window will appear.

Figure 5.2.1 Calibration pop-up window

6.0 PROCEDURE

6.1 In the **Transport Belt Calibration** window, click on *Set 50% Output to Calibrate*.

6.2 Place an object on the belt at the entrance of the furnace.

6.3 As the trailing edge of the object passes into the furnace start the stop watch timer.

6.4 As the object exits the furnace, stop the timer as the trailing edge of the object passes out of the furnace.

6.5 Convert the time from minutes and seconds to minutes as in the following example:

t = 15 minutes 24 seconds = 15 +24/60 minutes = 15.40 minutes

6.6 Divide the distance by the time to determine the speed.

Example: s = d / t

s = 315.25 in / 15.4 min = 20.4708 in/min

6.7 Enter the newly calculated speed in the **Transport Belt Calibration** box

6.8 Uncheck the *Set 50% Output to Calibrate box*.

6.9 Belt speed calibration is complete.

7.0 BELT SPEED CALIBRATION

Distance, inches, decimal	d	
Time, min-sec	t	
Time, minutes, decimal	t	
Speed, inches per minute	s=d/t	