How to Calibrate MTI Tube furnace

The temperature displaying on the controller panel (Now, we call it T1) and on sample inside furnace (Now, we call it T2) may be different because thermal couple connected with controller is located outside the tube. In order to achieve accurate temperature inside tube during heating, you shall calibrate tube furnace and then set temperature off (related function SC on the control panel). Please follow the steps below:

1. Must put porous ceramic blocks (included as accessory in package) in two ends of the tube before heating.
2. Buy or use another thermo-couple with enough length (25" from center of the furnace to one end of the tube).
3. Please drill a hole on the block (by a screw driver), and insert a thermo-couple through block, then make sure thermal couple tip is in the center of tube.
4. Connect the thermo-couple to a precise temperature meter (see www.mtixtl.com at the section of furnace accessories).
5. Follow the general heating process described in Operation Manual to heat furnace to the desired temperature and hold for 1 hour, then record the discrepancy of temperature (Now, we call it T) between T1 and T2, as T=T2-T1.
   Note: Always, T2 is minuend and T1 is subtrahend and T may be positive or negative.

External Thermal couple in ceramic for calibration

Built in thermal couple in furnace

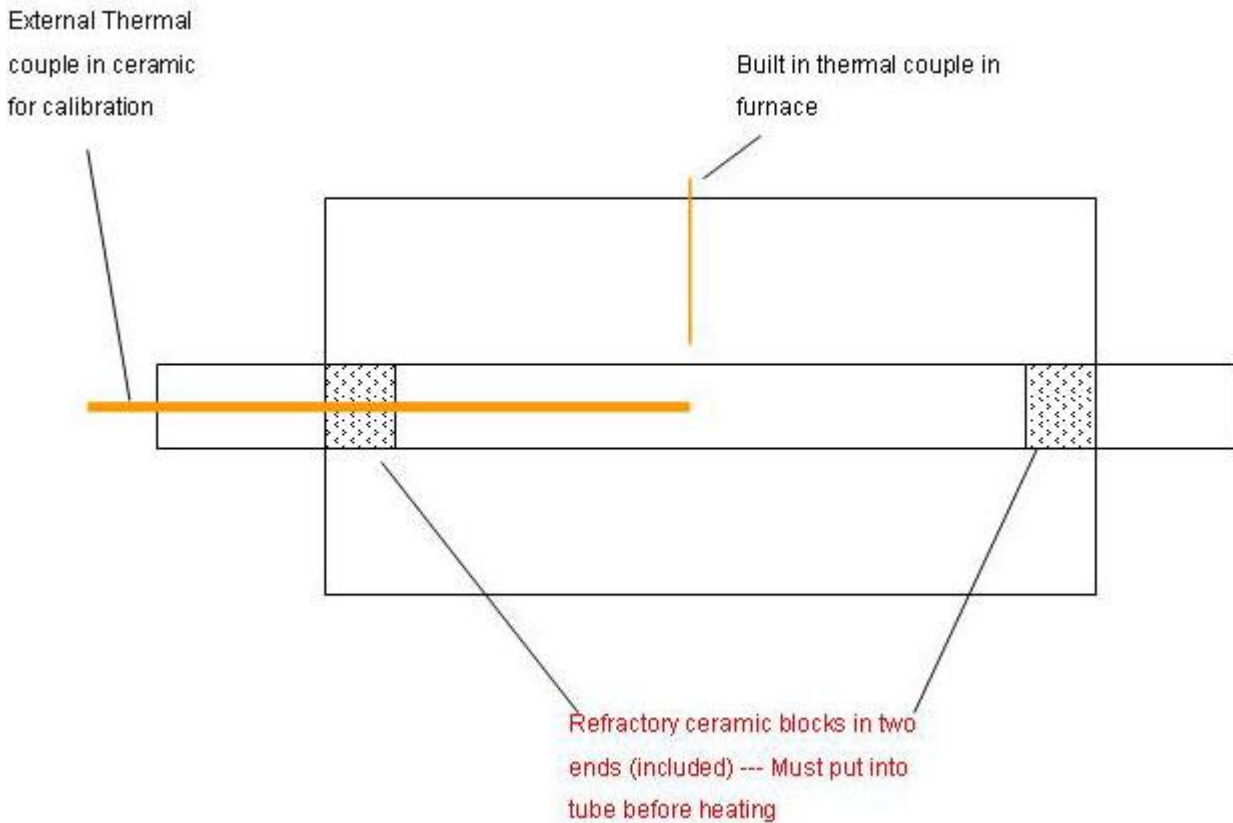Refractory ceramic blocks in two ends (included) --- Must put into tube before heating

Figure 1.   Plan form of the furnace while doing the above steps

6. Set temperature off on your controller
   a) From the function parameter state called "Loc", change its value from "0" to "808" so that you can enter the specific parameters setting state.
   b) Press the button ⟳ until the controller panel display the function "SC" as shown in the Figure 2 below:

Figure 2

   c) Use button ∧ and ∨ to input the value of T (if T is negative, make the number be 0, then, continue to use to get the negative value.
   d) Make sure value get saved, then end the specific parameters setting and get back to the normal mode.

We suggest that keep the parameters setting if the desired temperation will not change every time you do the work; reversely, if the desired temperation changes obviously, please do this calibration before starting your work.