

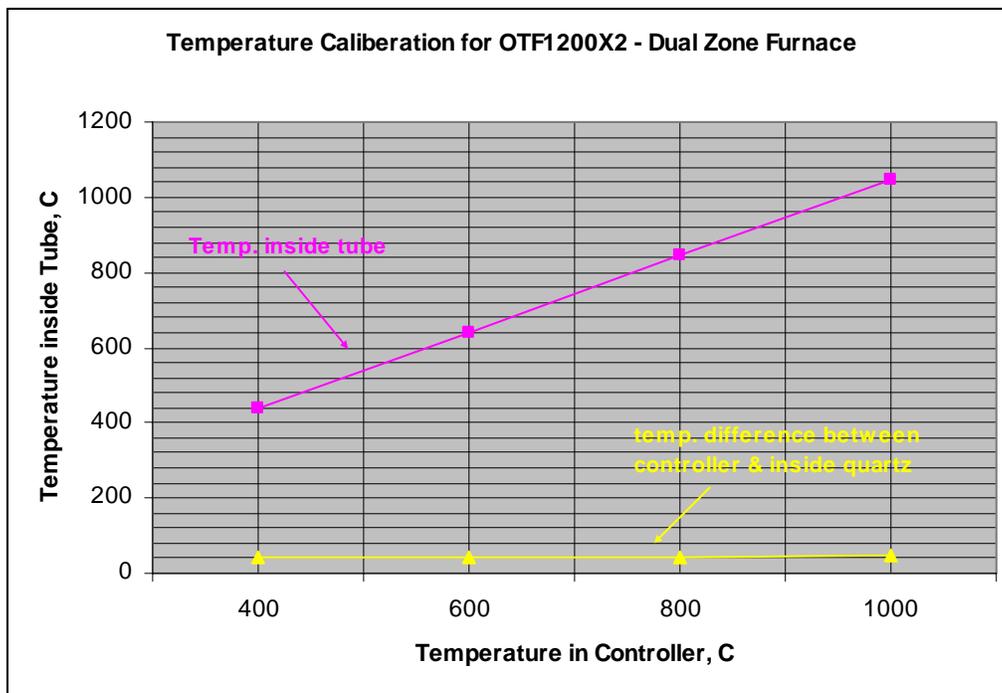
Temperature Calibration for OTF-1200X22 (2" Dual Zone Quartz Tube furnace)

In order to achieve accurate firing temperature from the dual tube furnace, you shall calibrate your tube furnace and set up temperature off from controllers before use. Please click the link: http://www.mtixtl.com/trouble_shooting_center/How-calibrate.pdf to see how to calibrate tube furnace.

Please be advised that temperature difference quite larger between inside tube and outside quartz tube of OTF1200X22 due to following reasons:

- Thermocouple position in controller is difference from center of tube
- Infrared radiation through quartz tube causes inside temperature is higher than outside

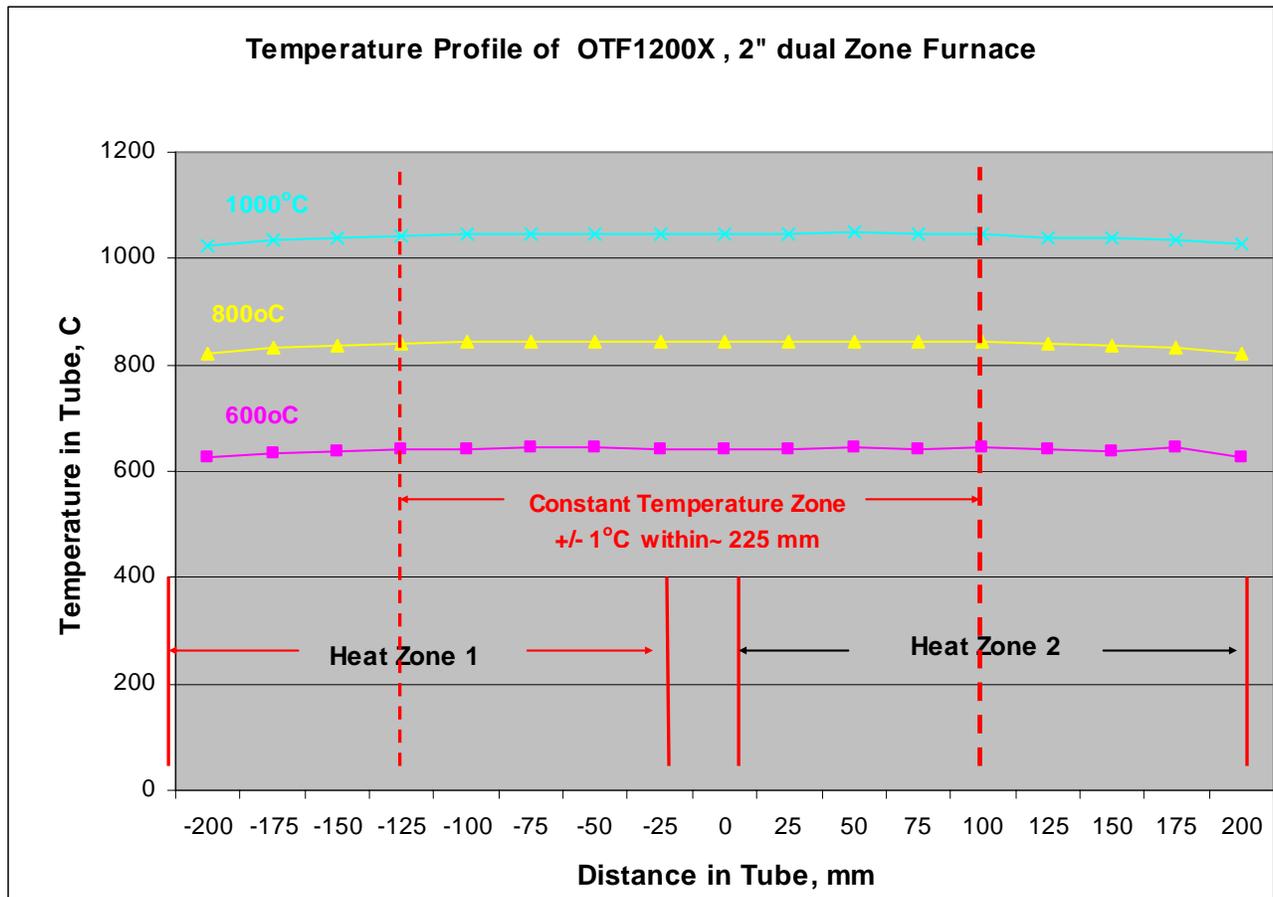
Typical temperature calibration curve for 2" OTF-1200X22 dual zone quartz tube furnace is listed as the below. The result shows that inside tube temperature is higher than temperature of controller from 40 °C (@400 °C) to 42 °C @1000 °C without setting temperature off.



For your convenience, we have pre-setting 40 °C temperature off in controller before shipping. (Please be noticed that after setting temperature off, temperature control will show temperature > 60 °C at room temperature) However, we suggest you calibrate the tube furnace again at your target temperature before using. Please refer operation manual to learn how to set up temperature off in controller, e.g. change SC value

Using dual zone furnace, you may achieve much longer constant temperature if set two zone at same temperature point. Typical temperature profile is shown in below, which can obtain ~ 225 mm length constant temperature with +/- 1 °C tolerance if set controller at same temperature.

Also you can achieve different thermo-gradient if set two zone at different temperature.



Please be advised that sample size, sample holder and atmosphere will affect temperature profile. We request you do your own calibration based on your sample condition. MTI is not responsible for any damage caused by improper using our furnace

If you have any difficulty to calibrate the tube furnace, please contact MTI engineering at info@mtixtl.com

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