

TIME AND TEMPERATURE VS COMMON DIAMETER THERMOCOUPLE CHARTS

Time and temperature vs common diameter tests are done with an Exposed Junction and a Grounded Junction. These tests are done in a certified dry block oven as well as in boiling water with a certified datalogger. Tests are sample illustrations to show a good measure of accuracy and speed between common diameters and junction types. Results may vary depending on cycle rate of the meter used, dryness of MGO powder, and bead size of the exposed junction.

Time Constant: This is defined by the time it takes the system to reach 63.2% of a temperature change within a systems initial response.

Special Limits of Error:

- TYPE K: $\pm 3.0^{\circ}\text{F}$ (1.1°C) or $\pm 0.4\%$
- TYPE J: $\pm 3.0^{\circ}\text{F}$ (1.1°C) or $\pm 0.4\%$
- TYPE T: $\pm 0.9^{\circ}\text{F}$ ($\pm 0.5^{\circ}\text{C}$) or $\pm 0.4\%$

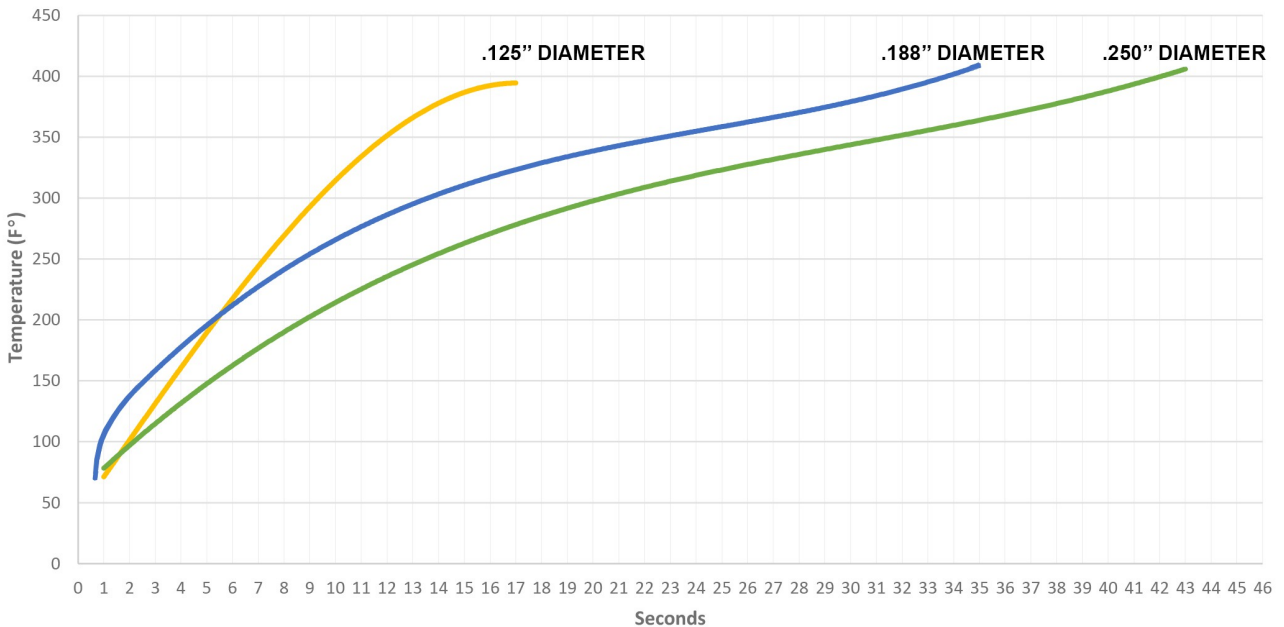
EXPOSED JUNCTION



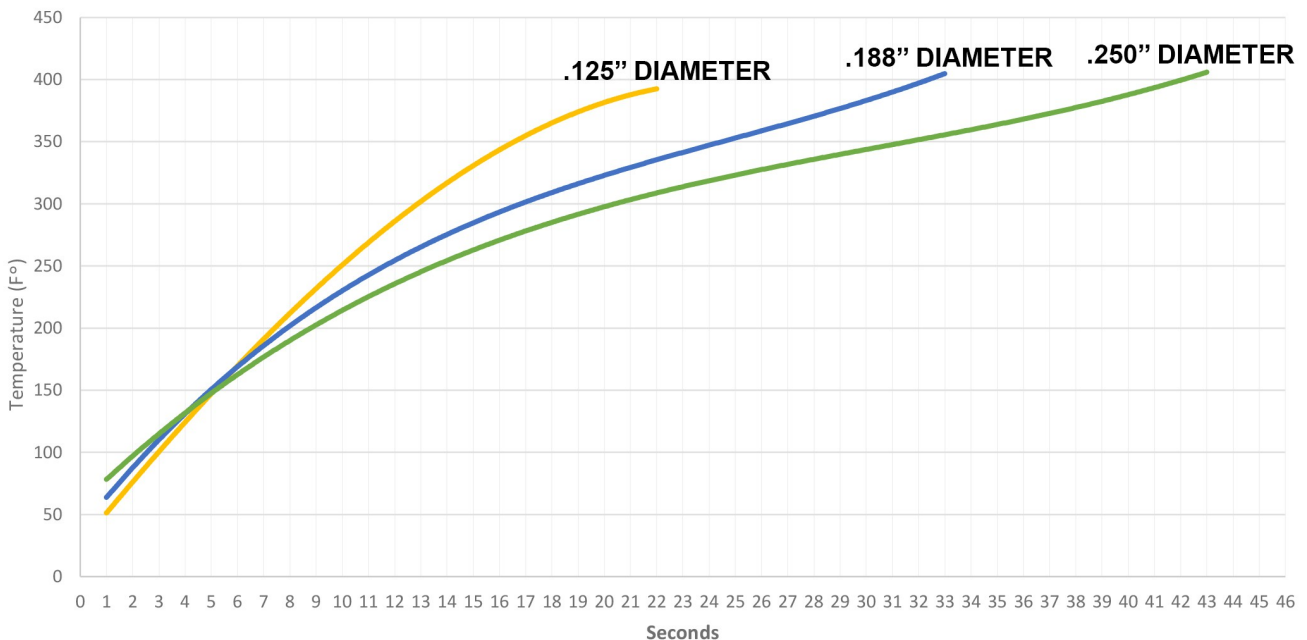
GROUNDING JUNCTION



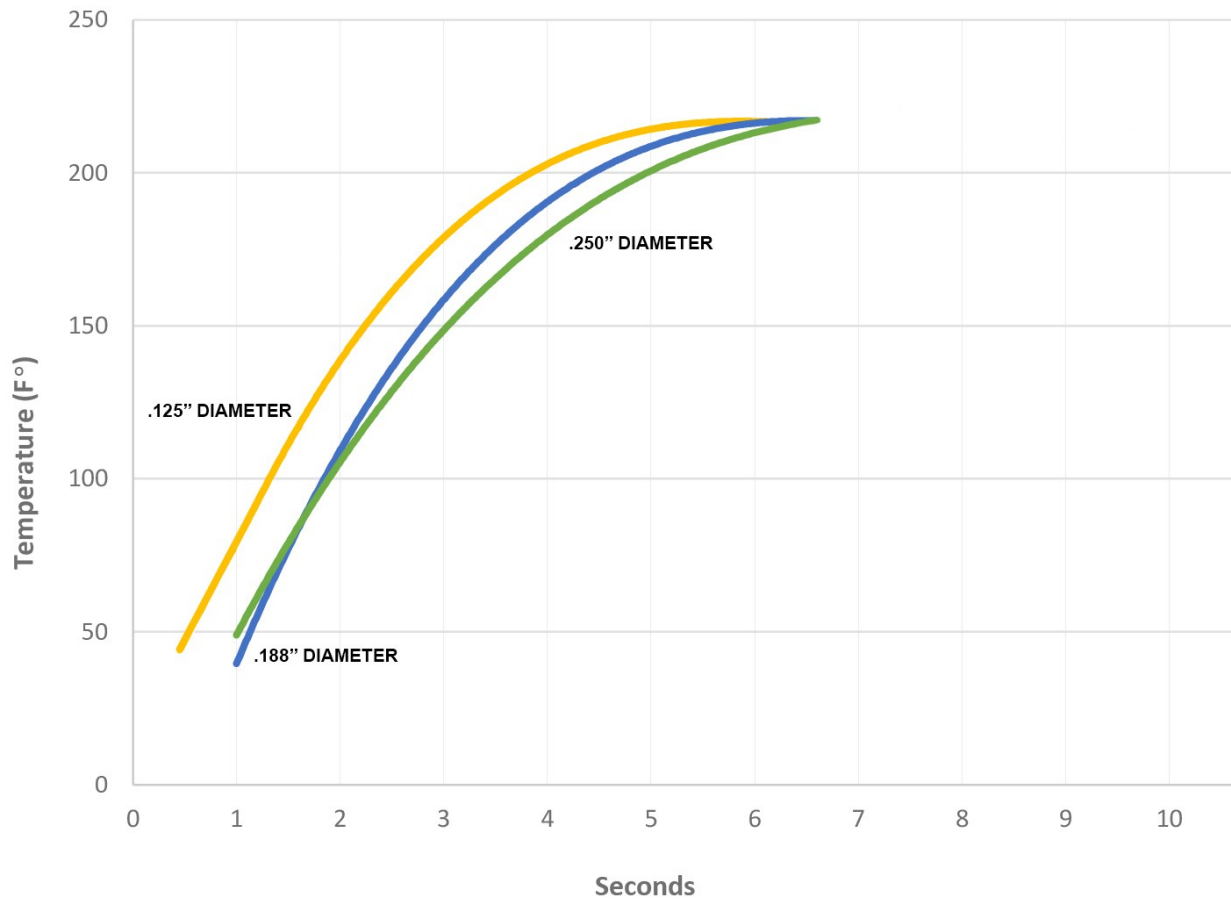
EXPOSED JUNCTION IN CERTIFIED DRY BLOCK OVEN



GROUNDING JUNCTION IN CERTIFIED DRY BLOCK OVEN



EXPOSED JUNCTION IN BOILING WATER



GROUNDING JUNCTION IN BOILING WATER

