



▶ **HIGH TEMPERATURE PYROMETER CALIBRATION MACHINE**

Thermo Electric Corporation Article

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High temperature pyrometer calibration machine has been designed to provide stable and accurate temperature to enable professionals to calibrate Temperature Sensing Devices by comparison method. High temperature pyrometer calibration machine model has been named FASTCAL because of its fast calibration. The 'FASTCAL' model has been designed to be rugged and easily maintained.



Introduction

FASTCAL model provides an isothermal enclosure in which the non contact type temperatures sensors can be calibrate against the temperature of the calibration bath. For traceable calibration a master calibrated sensor should be used. The method is widely accepted because the black body provides very stable temperature nearing to its controlled point, the Master sensor (non contact type) which is calibrated by independent Laboratory traceable to National standards, compares the sensor under test.



Fig: FASTCAL

The FASTCAL calibration source can deliver any temperature ranging between 700°C to 2700°C. A graphite strip is works as a cavity for blackbody calibrator under inert atmosphere the heated length of graphite element and aperture. These heating elements provide excellent uniformity and a heat-up time of within 5 minutes to reach 2700°C. A self tune digital PID controller with adjustable set point and infrared pyrometer to sense the temperature holds the temperature within ± 3 deg c up to 2700°C assuring high accuracy calibration. An independent over temperature alarm and cut out system, prevents heating elements burnout.



Features of FASTCAL:

- Maximum operating range up to 2700°C for pyrometer calibration.
- Rapid heating of furnace for fast calibration.
- Fast Response

Technical Specification

Voltage	440V AC
Power	20.0 KW
Supply Frequency	50/60 Hz

Temperature range	700 to 2700°C
Resolution	0.1 °C
Stability	± 3.0 °C
Controlling sensor	Pyrometer
Time to reach max. Temperature	5 Minutes
Operating Temperature	20 to 45 °C
Cavity size	150mm long 64 mm heated
Emissivity	0.99±0.01
Aperture	25mm diameter

Dimensions	900(H) x 600(W) x 440(D) mm (Approx.)
Weight	Approx 285 Kg. with all accessories

Thermo Electric Corporation Instrument has experience in manufacturing of temperature sensors. To enhance our customer's success we provide high quality products and services for "Temperature solution", tailored to their needs, and deliver to meet their schedule.