

High Temperature Black Body Furnace

600°C to 3000°C

Wide Temperature Range

FASTCAL 3000 offer a wide temperature range from 600°C to 3000 °C

Safety Interlocks

Safety Interlocks with Cooling water for over temperature and over current protection. also with Low purge gas flow.

Speed

The FASTCAL 3000 extremely quick to reach various temperatures, i.e. heats up 600°C to 3000°C in 5 minutes.

Accuracy and Emissivity

The FASTCAL 3000 provides excellent calibration with an effective emissivity of 0.99.

Computer Interface

The communication port (RS-232/RS-485) enables communication with selected FASTCAL 3000 calibrators for automation calibration and documentation thus it made documentation easy.

FASTCAL 3000

High Temperature Black-Body Calibrator



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.

Deliver any temperature ranging between 600°C to 3000°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 3000°C.

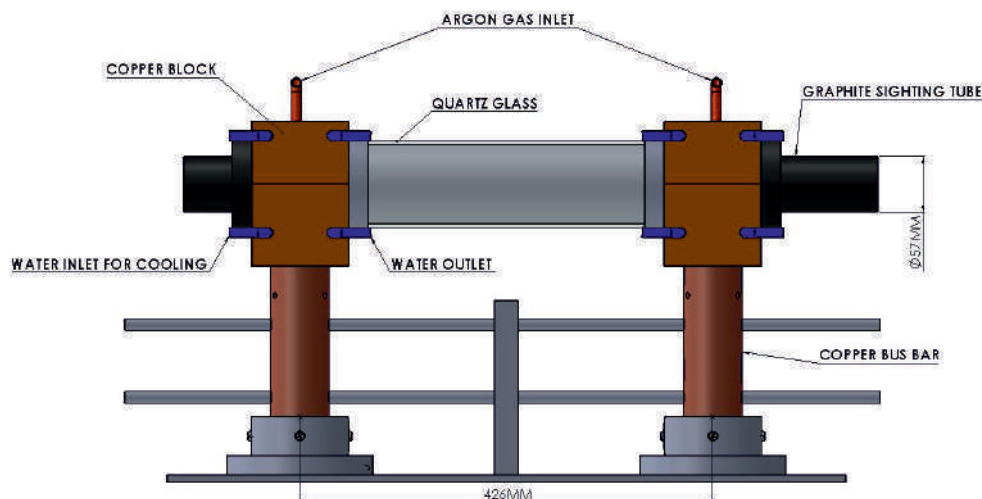
A self tune digital PID controller with adjustable set point And Infrared pyrometer to sense the Temperature holds the temperature within ± 3 deg c up to 3000°C assuring high Accuracy calibration. An independent over temperature alarm And cut out system, prevents heating elements burnout. The controller is mounted on the calibration source and remote set point programming may be achieved via the standard RS232 or optional RS485 communication port.

SPECIFICATIONS

FASTCAL 3000

Temperature Range	600°C to 3000°C
Method of Control	Self tuned PID controller
Controlling Sensor	Pyrometer
Temperature Resolution	0.1 °C
Emissivity	0.99
Cavity	Graphite Dual cavity blackbody, one side for control and one side for measurement
Heating Aperture	25mm
Cooling	Water cooling system through chiller unit.
Water in Chiller	Only Demineralised Water
Purge Gas	Argon gas flow with 15-20 LPM respective.
Purity of Gas	99.99%
Heating Time	Approx 5 Minute from 600 to 3000°C
Safety Interlocks	Cooling water over temperature, Low purge gas flow, cooling water flow, over current and over temperature protection.
Remote Controller	Set Point control and temperature monitoring by RS 232/485
Ambient Temperature	Ambient $\pm 15^{\circ}\text{C}$
Power	440VAC, Two Phase AC 50/60 Hz 60 KW or Customized
Dimension of chiller	1310mm(H) x 820mm(W) x 850mm(D)
Dimension of FASTCAL 3000	1880mm(H) x 900mm(W) x 1205mm(D)
Weight of Chiller	200 kg
Weight of FASTCAL 3000	755 Kg approx.

FASTCAL 3000 Graphite Cavity Assembly



Black Body Cavity Assembly Parts



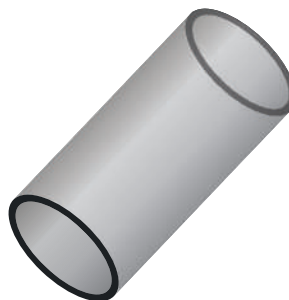
Graphite Cavity



Graphite Block Front



Graphite Block Back



Quartz tube

ACCESSORIES

- **Chiller Unit** : Chiller unit separately provided with FASTCAL 3000 for cooling purposes also use for safety interlock for high temperature protection
- **NABL accredited calibration certificate (Optional)**
- **Operational Manual**
- **Heating assembly**

