TEMPSENS

FASTCAL 3000

High Temperature Black-Body Calibrator for Industrial/ Laboratory Field Use

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 700°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.

High Temperature Black-Body Calibrator

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. This saves time and increases productivity.

Accuracy and Emissivity

The FASTCAL 3000 provides excellent calibration accuracy ± 0.3% with an effective emissivity of 0.99.

Accredited calibration

Each FASTCAL 3000 is delivered with an accredited calibration certificate.

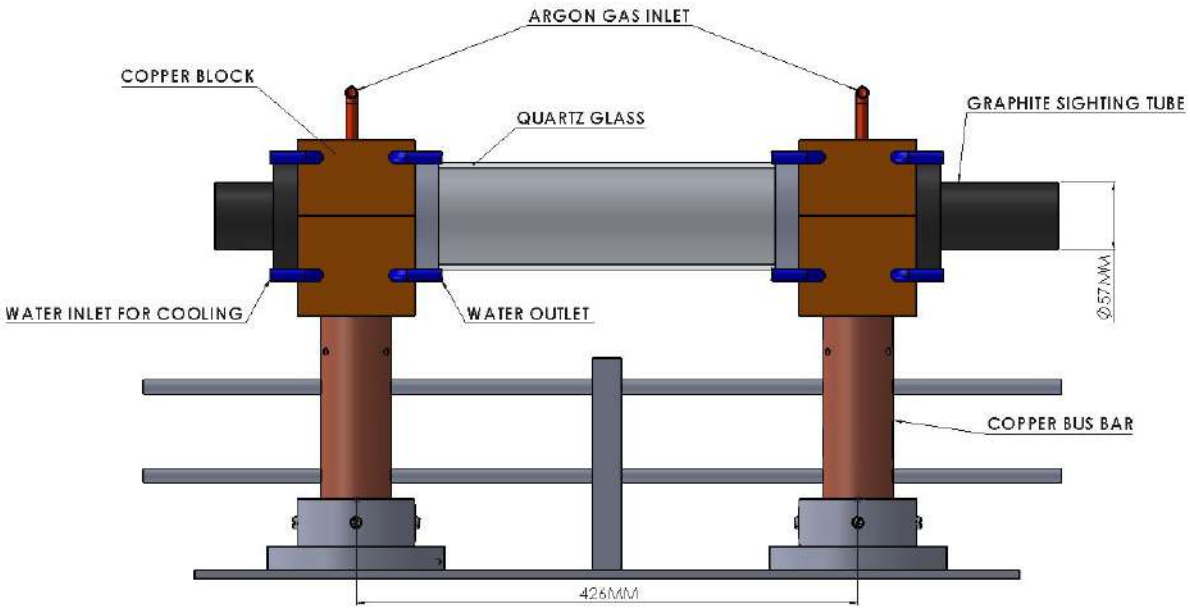
Computer Interface

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

SPECIFICATIONS

Temperature Range	600°C to 3000°C
Method of Control	PID controller Eurotherm make 2604
Controlling Sensor	Pyrometer, Make AST Model 250
Wavelength	1000 nm or 1600 nm (Pyrometer)
Accuracy	0.3 % of the reading with full span of 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, other size also available as per user request.
Cooling	Water cooling system through chiller unit.
Water in Chiller	Only Demineralised Water
Purge Gas	Argon gas flow with 10-12 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/USB
Ambient Temperature	Ambient ±15°C
Power	440VAC,Two Phase AC 50/60 Hz 60 KW or Customized
Dimension of chiller	1135mm(H) x 590mm(W) x 690mm(D)
Dimension of FASTCAL 3000	1880mm(H) x 900mm(W) x 1205mm(D)
Weight of Chiller	185 kg
Weight of FASTCAL 3000	755 Kg approx.

FASTCAL 3000 Graphite Cavity Assembly

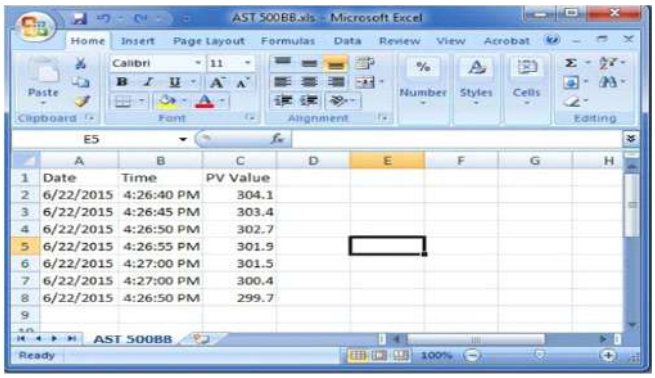


Standard Accessories

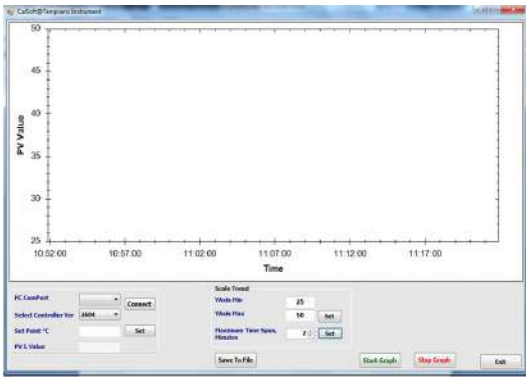
- **Chiller Unit :** Chiller unit separately provided with FASTCAL 3000 for cooling purposes also use for safety interlock for high temperature protection

- NABL accredited calibration certificate - 3 point
- Operational Manual

SOFTWARE



	A	B	C
1	Date	Time	PV Value
2	6/22/2015	4:26:40 PM	304.1
3	6/22/2015	4:26:45 PM	303.4
4	6/22/2015	4:26:50 PM	302.7
5	6/22/2015	4:26:55 PM	301.9
6	6/22/2015	4:27:00 PM	301.5
7	6/22/2015	4:27:00 PM	300.4
8	6/22/2015	4:26:50 PM	299.7



- CalSoft including for setting bath temperature and monitoring the PV. Graphical representations of PV/TIME with 2 hours data logging.

Black Body Cavity Assembly Parts

Graphite Cavity

Graphite Block Front

Graphite Block Back

Quartz tube

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