TEMPSENS

High Temperature Black Body Furnace

-High Accuracy

-High Temperature

-Highly Stable Temperature Calibrator for Industrial Field Uses

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TEMPSENS

Calsys 1200BB

Highly Accurate Temperature Calibrator For Industrial / Laboratory Field Use

Calsys 1200BB offers easy to use blackbody calibrator with high temperature range from 300 to 1200°C. It is a highly stable standard furnace for calibrating pyrometer and non contact sensor. This calibrator can be used on site for high temperature calibration and also find application in pyrometer industry, non contact sensor calibration. the unique feature of this black body furnace is large temperature control black body target with dia of 46mm and 85mm depth which offers large view for IR camera . The temperature of the calibrator is set and controlled by a self tuned PID controller with automatic super fine adjustment. Our newly designed CALsys 1200BB model offers better esthetic design and performance wise upgraded to next level. The emissivity of the target is 0.99(±0.01).

With the Tempsens make Temperature Calibrator, you have chosen an extremely effective instrument which we hope will live up to all your expectations. This is a fast, timesaving, and reliable true industrial temperature calibrator designed for on-site use.

During the past several years, we have acquired extensive knowledge of industrial temperature calibration. This expertise is reflected in our products which are all designed for daily use in an industrial environment.

High Temperature Black Body Furnace

Wide Temperature Range

CALsys 1200BB offer a wide temperature range from 300 °C to 1200 °C

Simple to use

The CALsys 1200BB block is ideal for Industrial/Laboratory field use. It is simple enough to testing and calibration uses.

Speed

The Calsys 1200BB extremely quick to reach various temperatures.

Accuracy and performance

The Calsys 1200BB is an easily portable unit that also provides excellent calibration accuracy with stability ±0.5°C at 1200°C.

Accredited calibration

Each Calsys 1200BB is delivered with an accredited calibration certificate.

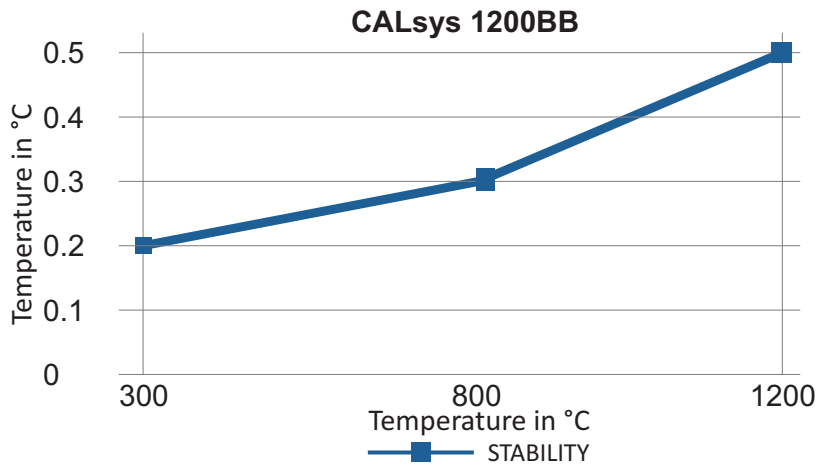
Computer Interface

The communication port (RS-232) enables communication with selected Calsys 1200BB calibrators for automation calibration and documentation thus it made documentation easy.

Specifications

Temperature range	300 °C to 1200 °C
Stability	±0.2°C at 300°C
	±0.3°C at 800°C
	±0.5°C at 1200°C
Cavity type	Silicon carbide
External Aparture	40mm dia
Cavity Diameter	46 mm (85mm depth)
Emissivity	0.98 (±0.02)
Method of Control	Self tunned PID controller
Heating time	1.5 Hrs
Resolution	1 °C
Display	LCD, °C or °F user-selectable
Size (H x W x D)	590(H) x 450(W) x 530(D) mm
Weight	55Kg
Power requirements	230 VAC, 2.5 KW(50 Hz)
Computer interface	RS - 232
Calibration	Accredited calibration certificate provided (Optional)
Environmental operating conditions	0 °C to 40 °C, 0 % to 90 % RH (non-condensing)
Specifications valid in environmental conditions	13 °C ... 33 °C

STABILITY OF CALSYS 1200 BB



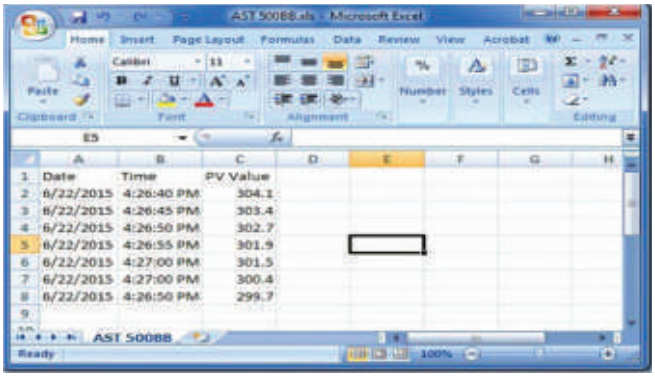
Access Opening 1200BB

Blackbody Cavity for CALsys 1200BB models

We use 46mm dia silicon carbide (Radiation cavity type) in CALsys 1200BB. We also offer customized access opening based on Customer requirements.

Silicon Carbide Cavity.

SOFTWARE



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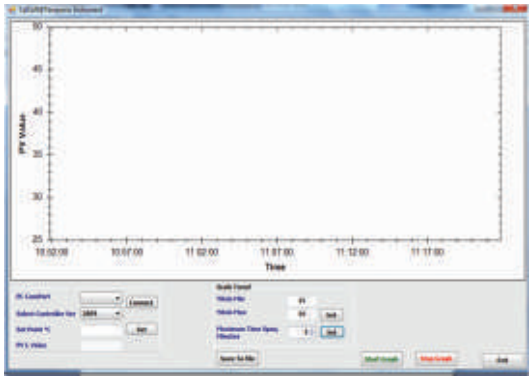
3	6/22/2015	4:26:45 PM	303.4
4	6/22/2015	4:26:50 PM	302.7
5	6/22/2015	4:26:55 PM	301.9
6	6/22/2015	4:27:00 PM	301.5
7	6/22/2015	4:27:00 PM	300.4
8	6/22/2015	4:26:50 PM	299.7



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

MASTER SENSOR (OPTIONAL)

Master Pyrometer

- Black Body Cavity……Part No. Eq3
- NABL accredited calibration certificate - 3 points (Optional)
- Operational Manual

TEMPSENS

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TEMPSENS

Calsys 1500BB

Highly Accurate Temperature Calibrator For Industrial / Laboratory Field Use

High Temperature Black Body Furnace

Wide Temperature Range

Calsys 1500BB offer a wide temperature range from 500 °C to 1500 °C

Simple to use

The Calsys 1500BB block is ideal for Industrial / Laboratory field use.It is simple enough to testing and calibration uses.

Speed

The Calsys 1500BB extremely quick to reach various temperatures. This saves time and increases productivity.

Accuracy and performance

The Calsys 1500BB is an easily portable unit that also provides excellent calibration accuracy with stability ±1.0 °C at 1500 °C.

Accredited calibration

Each Calsys 1500BB is delivered with an accredited calibration certificate.

Computer Interface

The communication port(RS-232) enables communication with selected Calsys 1500BB calibrators for automation calibration and documentation thus it made documentation easy.

Calsys 1500BB offers easy to use blackbody calibrator with high temperature range from 500 to 1500°C. It is a highly stable standard furnace for calibrating pyrometer and non contact sensor. This calibrator can be used on site for high temperature calibration and also find application in pyrometer industry, non contact sensor calibration. the unique feature of this black body furnace is large temperature controlblack body target of 40mm and 85mm long. The temperature of the calibrator is set and controlled by a self tuned PID controller with automatic super fine adjustment. Our newly designed Calsys 1500BB model offers better esthetic design and performance wise upgraded to next level.

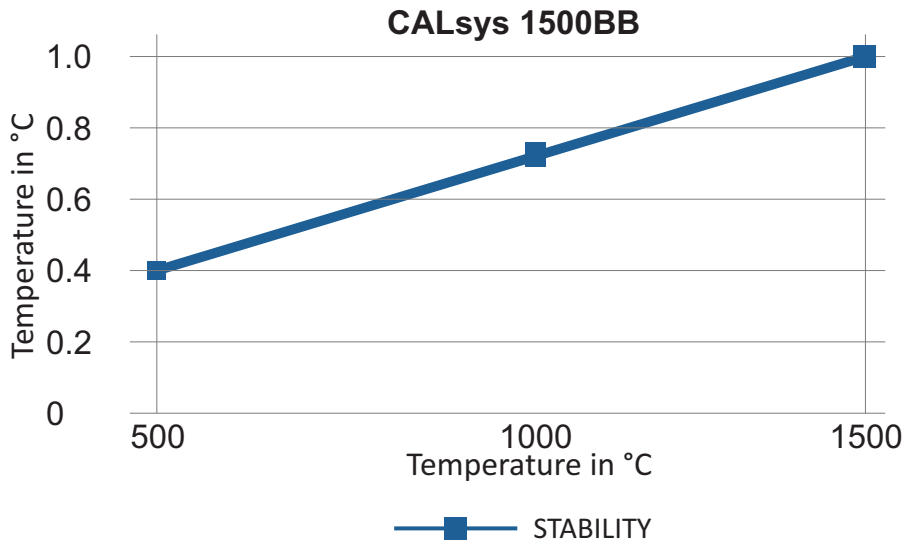
With the Tempsens make Temperature Calibrator, you have chosen an extremely effective instrument which we hope will live up to all your expectations. This is a fast, timesaving, and reliable true industrial temperature calibrator designed for on-site use.

During the past several years, we have acquired extensive knowledge of industrial temperature calibration. This expertise is reflected in our products which are all designed for daily use in an industrial environment.

SPECIFICATIONS

Temperature range	500 °C to 1500 °C
Stability	±0.2°C at 500°C
	±0.3°C at 1000°C
	±0.5°C at 1500°C
Cavity type	Silicon carbide
External Aparture	40 mm dia
Method of Control	Self tunned PID controller
Cavity Diameter	46mm (85 mm depth)
Heating time	1.5 Hrs
Resolution	1 °C
Display	LCD, °C or °F user-selectable
Size (H x W x D)	590(H) x 450(W) x 530(D) mm
Weight	55Kg
Power requirements	230 VAC, 3.0 KW(50 Hz)
Computer interface	RS - 232
Calibration	Accredited calibration certificate provided (Optional)
Environmental operating conditions	0 °C to 40 °C, 0 % to 90 % RH (non-condensing)
Specifications valid in environmental conditions	13 °C ... 33 °C

STABILITY OF CALSYS 1500 BB



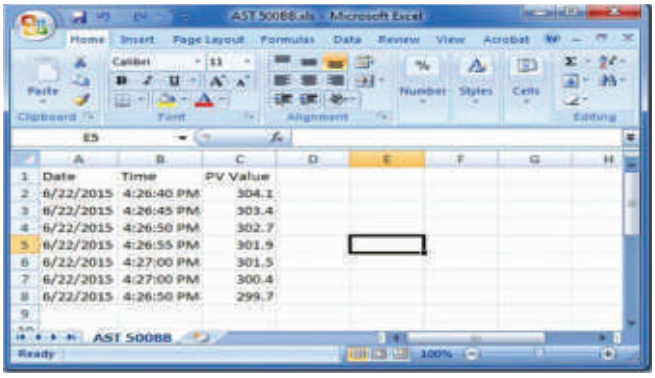
Access Opening 1500BB

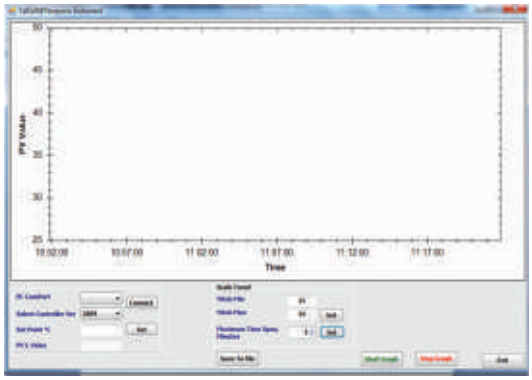
Blackbody Cavity for CALsys 1500BB models

We use 46mm dia silicon carbide (Radiation cavity type) in CALsys 1500BB. We also offer customized access opening based on Customer requirements.

Silicon Carbide Cavity.

SOFTWARE





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

MASTER SENSOR (OPTIONAL)

- Master Pyrometer

- Black Body Cavity……Part No. Eq3
- NABL accredited calibration certificate - 3 points (Optional)
- Operational Manual

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TEMPSENS

Calsys 1700BB

Highly Accurate Temperature Calibrator For Industrial / Laboratory Field Use

CALsys 1700BB offers easy to use blackbody calibrator with high temperature range from 500 to 1700°C. It is a highly stable standard furnace for calibrating pyrometer and non contact sensor. This calibrator can be used on site for high temperature calibration and also find application in pyrometer industry, non contact sensor calibration.. The unique feature of this black body furnace is large temperature control black body target of 29mm diameter. The temperature of the calibrator is set and controlled by a self tuned PID controller with automatic super fine adjustment. Our newly designed CALsys 1700BB model offers better esthetic design and performance wise upgraded to next level.

Tempsens make Temperature Calibrator extremely effective instrument which we hope will live up to all your expectations. This is a fast, timesaving, and reliable true industrial temperature calibrator designed for on-site use.

During the past several years, we have acquired extensive knowledge of industrial temperature calibration. This expertise is reflected in our products which are all designed for daily use in an industrial environment.

High Temperature Black Body Furnace

Wide Temperature Range

Calsys 1700BB offer a wide temperature range from 500 °C to 1700 °C

Simple to use

The Calsys 1700BB block is ideal for Industrial/ Laboratory field use. It is simple enough to testing and calibration uses.

Speed

The Calsys 1700BB extremely quick to reach various temperatures. This saves time and increases productivity.

Accuracy and performance

The Calsys 1700BB provides excellent calibration accuracy with stability ±1.5°C at 1700 °C.

Accredited calibration

Each Calsys 1700BB is delivered with an accredited calibration certificate.

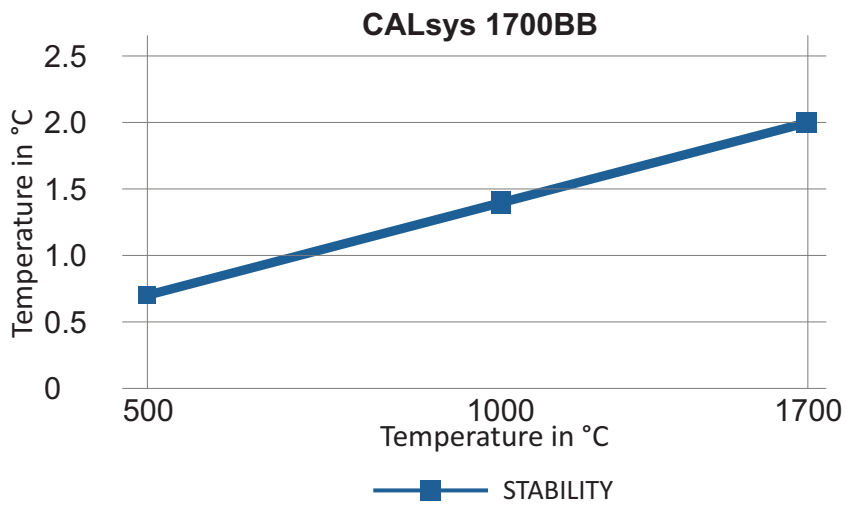
Computer Interface

The communication port (RS-232) enables communication with selected Calsys 1700BB calibrators for automation calibration and documentation thus it made documentation easy.

SPECIFICATIONS

Temperature range	500 °C to 1700 °C
Stability	±0.5°C at 500°C
	±1.0°C at 1000°C
	±1.5°C at 1700°C
Stabilization time	15 to 20mins
Controlling sensor	B type duplex(PT/RH-PT)
Cavity type	ceramic
Cavity dimension	29mm End closed tube
Emissivity	0.97 (±0.02)
Heater	MoSi
Heating time	3 Hrs
Method of control	Digital self tuned PID Controller
Resolution	1 °C
Display	LCD, °C or °F user-selectable
Size (H x W x D)	700(H) x 500(W) x 550(D) mm
Weight	130Kg (Overall)
Power requirements	230 VAC 50/60Hz
Computer interface	RS - 232
Calibration	Accredited calibration certificate provided (Optional)
Environmental operating conditions	0 °C to 40 °C, 0 % to 90 % RH (non-condensing)
Specifications valid in environmental conditions	13 °C ... 33 °C

STABILITY OF CALSYS 1700 BB



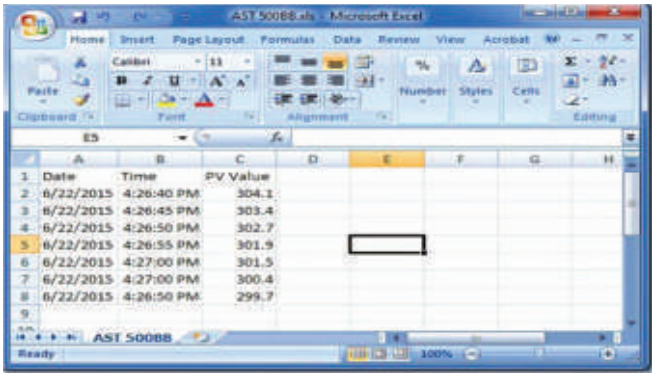
Access Opening 1700BB

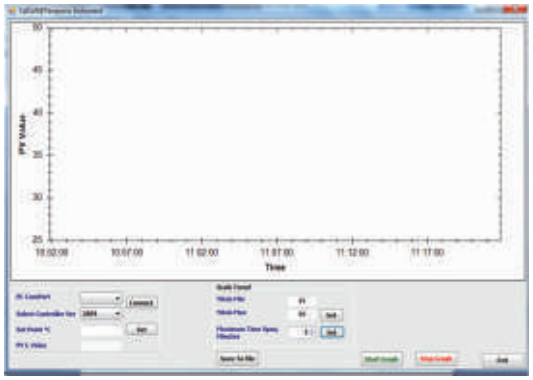
Blackbody Cavity for CALsys 1700BB models

We use 29mm dia End closed tube (Radiation cavity type) in CALsys 1700BB. We also offer customized access opening based on Customer requirements.

Ceramic Cavity

SOFTWARE





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

MASTER SENSOR (OPTIONAL)

- Mater pyrometer

- Black Body Cavity……. Part No. Eq3
- NABL accredited calibration certificate - 3 points (Optional)
- Operational Manual

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TEMPSENS

FASTCAL 3000

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

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 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.

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.

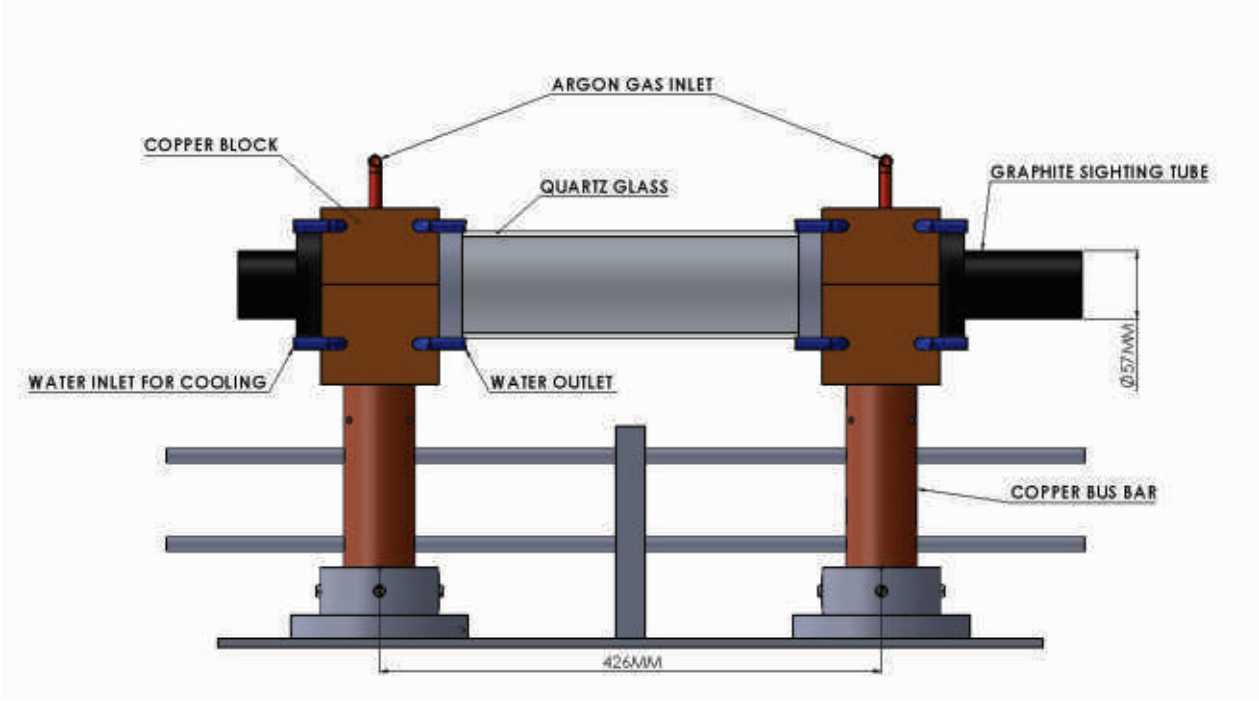
Deliver any temperature ranging between 700°C to 3000°C. A graphite strip is works as a cavity for blackbody calibrator under inert atmosphere the heated length of graphite element and aperture. These heating elements provide excellent uniformity and a heat-up time of within 5 minutes to reach 3000°C.

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.

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)
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	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.

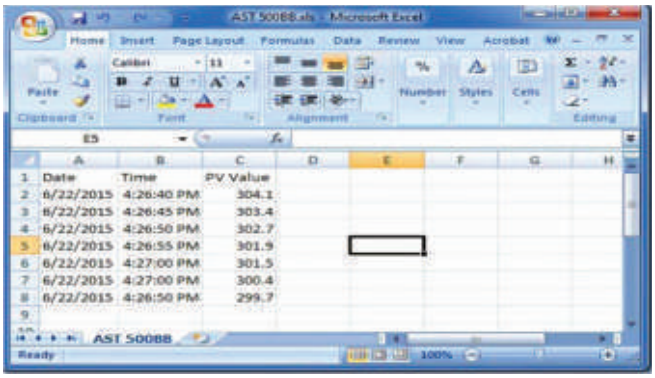
FASTCAL 3000 Graphite Cavity Assembly



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 points (Optional)
- Operational Manual

SOFTWARE



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6/22/2015	4:26:50 PM	302.7
6/22/2015	4:26:55 PM	301.9
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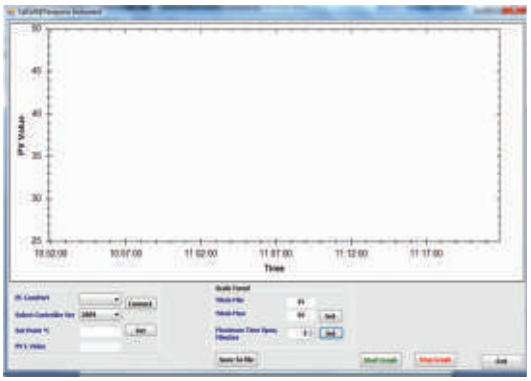
6/22/2015	4:27:00 PM	300.4
6/22/2015	4:26:50 PM	299.7



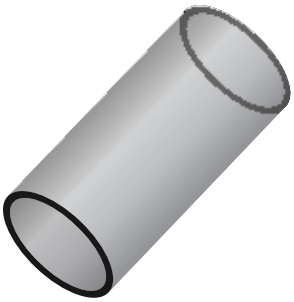
- CalSoft including for setting bath temperature and monitoring the PV. Graphical representations of PV/TIME with 2 hours data logging.

Black Body Cavity Assembly Parts

Graphite Cavity

Graphite Block Front

Graphite Block Back



Quartz tube

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