CALSYS 1000BB CALSYS 1000BB CALSYS 1000BB
www.tempsens.com

KEY FEATURES

- Wide Operating Range (50 to 1000°C)
- High Stability
- PC interfacing
- Simple to use and cost effective
- Sighting tube

STANDARD ACCESSORIES

- NABL accredited calibration certificate - 3 point
- Software - Cal Soft including for setting bath temperature and monitoring the PV. Graphical representations of PV/TIME with 2 hours data logging.
- Operational Manual
- Adjust frequency through aperture

SPECIAL FEATURES

- User friendly software for blackbody control through PC.
- Real time blackbody temperature display and logging.
- Monitor blackbody status (stabilized/un-stabilized) in real time.
- Save and recall pre-defined setting of blackbody.
- Software and driver to operate the blackbody through PC should be provided preferably in pen drive/CD.

HIGH STABILITY BLACK BODY FURNACE

CALSys 1000BB calibration source is a highly stable standard Black Body Furnace for calibrating noncontact IR thermometer for the wide temperature range of 50 to 1000°C.

The unique feature of this Black Body Furnace is large temperature controlled black body target with a diameter of 29 mm and 150 mm which offer large view area for IR Thermometer.

The Emissivity of the target is 0.98 (±0.01). The temperature of the calibrator is set and controlled by a self tuned PID controller with automatic super fine adjustment.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
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<tbody>
<tr>
<td>Temperature Range</td>
<td>50 to 1000°C</td>
</tr>
<tr>
<td>Temperature Resolution</td>
<td>≤0.1</td>
</tr>
<tr>
<td>Cavity Uniformity</td>
<td>±4 or better (at 800°C Or higher)</td>
</tr>
<tr>
<td>Stability</td>
<td>±0.2°C at 50°C, ±0.4°C at 500°C, ±0.6°C at 1000°C</td>
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<tr>
<td>Emissivity</td>
<td>≥ 0.98</td>
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<tr>
<td>Controlling Sensor</td>
<td>Precision PT/RH-PT T/C</td>
</tr>
<tr>
<td>Method of Control</td>
<td>Digital self tuned PID Controller</td>
</tr>
<tr>
<td>Time to reach max temp</td>
<td>≤2 hr</td>
</tr>
<tr>
<td>Computer Interface</td>
<td>RS - 232</td>
</tr>
<tr>
<td>Operating Temp</td>
<td>20 to 45°C</td>
</tr>
<tr>
<td>Power Requirement</td>
<td>220-240 VAC, 50 Hz</td>
</tr>
<tr>
<td>Dimensions</td>
<td>270(H) x 360(W) x 270(D) mm</td>
</tr>
<tr>
<td>Radiation Cavity Type</td>
<td>Ceramic cavity with high emissivity paint</td>
</tr>
<tr>
<td>Cavity Dimension</td>
<td>29 mm Dia x150 mm depth</td>
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</table>

Light Aperture wheel integrated with blackbody

Aperture Selection : Manual and motorized option available

Min no. of Apertures : 8

Apertures Size (Tolerance ± 10%)

- 0.0125”, 0.025”, 0.050”, 0.10”, 0.20”, 0.40”, 0.60” and 1.0”

External Aperture : 25 mm dia.

Weight : Approx 15 Kg

Control Panel : Separate control box for temp. & Frequency
Motor with Chopper Controller

A) Hardware Control

1) Control Unit:

The Control Unit box contain PID controller to display the temperature of furnace and Micro-controller unit to display frequency of the Motors. The microcontroller unit is provided with LCD display with 3 keys i.e. func key, up key and down key.

B) Software control

The provided software “Chopper Software” offers digital PC interface RS-232. Using this software we can set all the parameters like motor selection, chopper blade selection and frequency. This software also shows the measured frequency value.