CALsys -80/50
CALsys -80/50 Autocal ⊗

Highly accurate & Automatic Liquid Calibration bath for Industrial/Laboratory field use

Liquid Calibration Bath

Wide Temperature Range

The Calsys -80/50 & Calsys -80/50 Autocal offer a wide temperature range from -80 °C to 50 °C

Large immersion depth

The Calsys -80/50 & Calsys -80/50 Autocal is ideal for Industrial/ laboratory field use Large immersion depth 200mm with 120x120 access opening and wide operating range

CFC free refrigrents

The Calsys-80/50 & Calsys-80/50 Autocal extremely highly accurate liquid stirrer bath with free of CFC refrigerants. CFC refrigerant is immensely damaging to the environment. CFC damages the Ozone layer and contributes directly to the destruction of our environment.

Accuracy and performance

The Calsys-80/50 & Calsys-80/50 Autocal is an easily portable unit that also provides execellent calibration accuracy with stability ±0.04°C at -80°C.

Accredited calibration

Each Calsys -80/50 & Calsys -80/50 Autocal is delivered with an accredited calibration certificate

Computer Interface

The communication port(RS- 232) enables communication with selected Calsys -80/50 & Calsys -80/50 Autocal calibrators for automation calibration and documentation thus it made documentation easy.

CALsys -80/50 Autocal   CALsys -80/50

CALsys -80/50 & CALsys -80/50 Autocal offers easy to use liquid temperature calibrator with high temperature range from -80 to 50°C. It is a highly stable standard furnace for calibrating thermocouples / RTD. It provide superior thermal environment for probe immersion as no air gape exist between the probe and the medium, thermal coupling is therefore much better than the alternatives described and the stirring results in very even heat distribution throughout the medium. Methanol is used for temperature below 0°C water from 0 to 80 and silicon oil up to 250. It has large tank which filled with methanol. The liquid is heated or cooled to the desired temperature. We have seven types of liquid baths. The volume is 9 ltr. And access opening is 120X120mm with 200mm depth. The temperature of the calibrator is set and controlled by a self tuned PID controller with automatic super fine adjustment. Our newly designed Calsys -80/50 model offers better esthetic design and performance wise upgraded to next level.The CALsys -80/50 Autocal is an automatic temperature calibration system for the Thermocouple and RTD's. The system consists of Temperature bath and PC software, which together contribute to the whole cycle of auto calibration process. The system accept 4 channels, 4 Thermocouples or 4 RTD's. The connection for these channels through special type of locking connectors. The channel configuration can be done with LCD display via touch screen keypad. The thermocouple microvolt & RTD ohm reading for each channel is monitored with CJC compensation. After the calibration process complete the PC software generates a report of actual calibrated values for the inputs.

With the Tempsens make Compact 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.

CALsys -80/50 Autocal & CALsys -80/50

Temperature range	-80 °C to 50 °C
Accuracy	±0.5 °C
Stability	±0.04°C at -80°C
	±0.07°C at 0°C
	±0.05°C at 50°C
Uniformity	±0.05°C at -80°C
	±0.09°C at 0°C
	±0.07°C at 50°C
Volume	9 Ltr
Immersion depth	200mm
Access opening	120X120 mm
Method of Control	Self tunned PID controller
Cooling time	60 Min (room temperature to -80°C)
Resolution	0.1 °C
Display	LCD, °C or °F user-selectable
Size (H x W x D)	1200(H) x 630(W) x 500(D) mm
Weight	100Kg
Power requirements	230 VAC, 2 KW(50 Hz)
Computer interface	RS - 232
Calibration	Accredited calibration certificate provided
Environmental operating conditions	0 °C to 40 °C, 0 % to 90 % RH (non-condensing)
Specifications valid in environmental conditions	13 °C ... 25 °C
Input (CALsys -80/50 Autocal)	Four channels(one master and three test sensors).high quality universal LEMO connector suitable both for T/C (J, K, N, T, R, S, B type) and Rtd
Software (CALsys -80/50 Autocal)	The calibrator will be provided with software for data recording (Manual Mode) and Test Certificate genration in Auto Mode
Data logging (CALsys -80/50 Autocal)	Data logging facility with logged data export to computer through LAN port (optional USB)

SENSOR CONNECTION (CALsys -80/50 Autocal)

The Calibration system provides calibration up to four channels i.e. one master and three test sensors . We use high quality universal LEMO connector i.e. suitable both for T/C and Rtd.
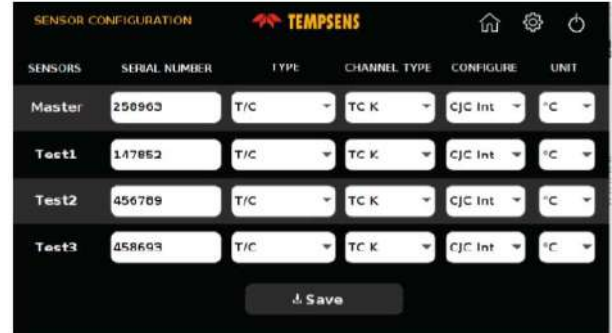
Connection for First TEST Sensor

Connection for MASTER Sensor

Connection for Second TEST Sensor

Connection for Third TEST Sensor

Home Screen: In this screen user can select sensor configuration (for selection of type of sensors), mode of operation (auto / manual) and data transfer (file transfer). This window also shows the ongoing process.
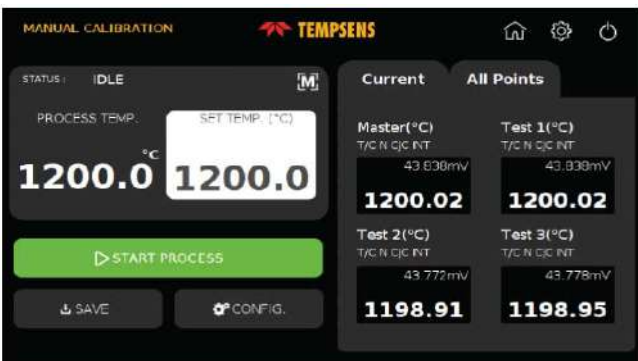
Sensor Configuration: In this screen user select the sensors Thermocouple (J, K, B, N, R, S, T type) / RTD(PT 100, PT 1000, PT 50 etc.) for calibration with their serial number and temperature unit (C/F/K).
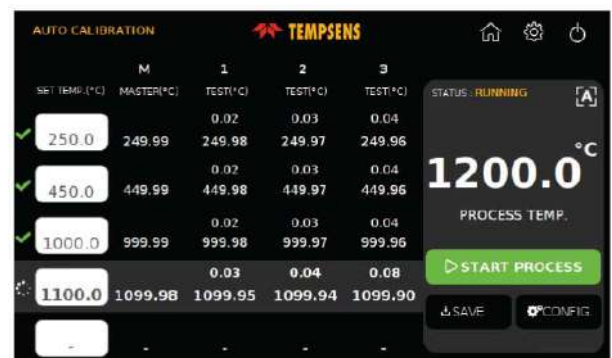

CALSYS -80/50 Autocal have two operating modes i.e. Manual and Auto mode

Manual Mode: In this screen user set the temp. Point for calibration and on clicking start process button the process of calibration starts

Auto Mode: In this screen user sets the temperature Points for calibration (Max 5 Points)

SOFTWARE : Tempsens make Easy to use Customized software enables end user to access temperature data both for Manual mode and Automode

AUTOMATIC CALIBRATION REPORT GENERATION

- Tempsens can offer customized data saving option both for manual and Automode.
- After completion manual/Automode automatic calibration report can be generated at PC side based on pre define format.
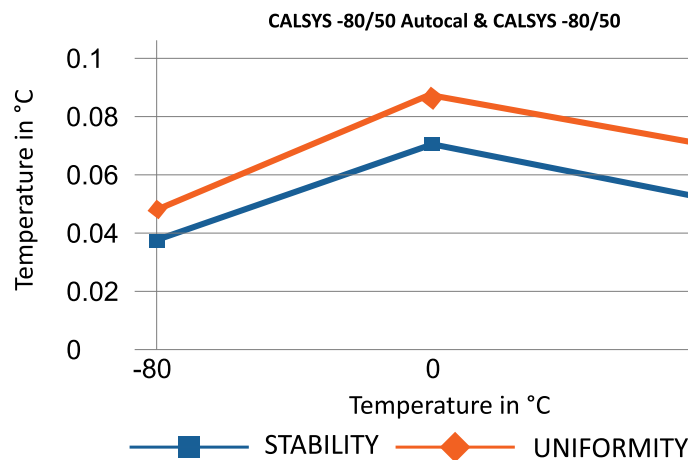
Insert construction

Inserts for CALSYS -80/50 Autocal & CALSYS -80/50 model

Inserts for CALsys -80/50 Autocal & CALsys -80/50 about 120X120 mm access opening with 200mm intertion depth. All specifiactions based on outer diameter of the sensor under test. We also offer customized hole size based on Customer requierements.
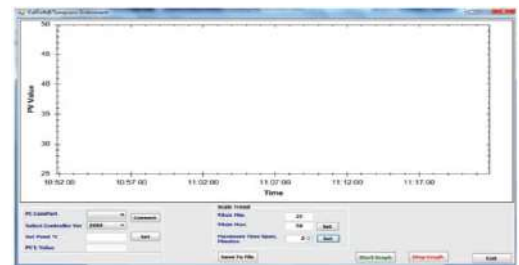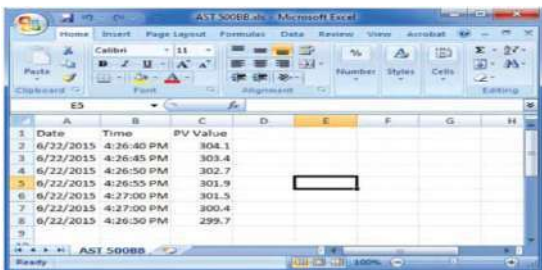
Insert Model Description

Hole Size	Description
Ci1	Multihole, 4 x 6.5 mm
Ci2	Special (Customized)

STABILITRY & UNIFORMITY

CALSYS -80/50 Autocal & CALSYS -80/50

Chart: Temperature in °C (y-axis, 0 to 0.1) vs Temperature in °C (x-axis: -80, 0, 50)
Legend: STABILITY, UNIFORMITY

SOFTWARE

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

MASTER SENSOR

- Reference Standard RTD Part no. TPRT- A- 300.

- NABL accredited calibration certificate - 3 point

- Operational Manual

BLACK BODY CAVITY (OPTIONAL)

The calibration of infrared (IR) thermometers can be performed with black body cavity included with CALsys -80/50 & CALsys -80/50 calibrator. The black body has special design and structure that ensure a high emissivity and accurate result.