

- TP Basic
- TP Solid
- TP Premium
- Accessories
- TT-Scan



Including products with:



TEMPERATURE CALIBRATORS





For industry and service

Good reasons for a calibration

- Maintain consistently high product quality
- Meet industry standards and legal regulations
- Optimize processes and boost productivity
- Avoid unscheduled downtime

Temperature sensors are subject to mechanical, thermal and chemical stress. This results in a drift the longer the sensors are in use. Only the regular calibration of the sensors provides information on the difference between the actual temperature and the measured temperature and makes the specific drift visible. In measuring tasks, readings are often taken without regard to the fact that every display value contains an error. These measured errors are probably still negligible in private applications, but in industrial applications even the smallest inaccuracy can lead to production errors, for instance.

Calibration with SIKA

Dry block calibrators and micro calibration baths are used to check and calibrate a wide range of temperature measuring instruments and temperature sensors. Mechanical, electro-mechanical or electronic measurement equipment can be checked with ease. The following can be tested directly:

- Contact-based immersion or surface temperature sensors
- Sensors with special shapes and sizes
- Non-contact infrared instruments and thermal imaging cameras

The compact and robust SIKA instruments are easy to transport, simple to use and offer all the features required for the specific test. Our instruments are already standard in many development, research and testing labs, testing and inspection departments and in the production and manufacturing sector.

Dr. Siebert & Kühn GmbH & Co. KG
Struthweg 7-9
34260 Kaufungen
Germany
www.sika.net

akkreditiert durch die / accredited by the
Deutsche Akkreditierungsstelle GmbH
als Kalibrierlaboratorium im / as calibration laboratory in the
Deutschen Kalibrierdienst DKD

| | | |
|--|--|---|
| Kalibrierschein Calibration certificate | | |
| Gegenstand Object | Mikrokalibrierbad Micro calibration bath | Dieser Führung der Ein- richtung |
| Hersteller Manufacturer | Dr. Siebert & Kühn GmbH & Co. KG | Interpret Die DAKKS |
| Typ Type | TPM165SE | Accred- ited by |
| Fabrikat/Serien-Nr. Serial number | 1411801 | for the Wieder- herstellung |
| Auftraggeber Customer | Muttermann AG Muttergass 1 12345 Musterstadt | Ther- mische Ein- richtung |
| Auftragsnummer Order No. | 100 741 854 | Inter- national The DAKKS |
| Anzahl der Seiten des Kalibrierscheines Number of pages of the certificate | 4 | Accred- ited by the DAKKS |
| Datum der Kalibrierung Date of calibration | 2014-11-30 | Inter- national The DAKKS |
| Dieser Kalibrierschein darf nur vollständig und unverändert weiterverbreitet werden. A Genehmigung sowohl der Deutschen Akkreditierungsstelle GmbH als auch des Kalibrierscheins ohne Unterschrift haben keine Gültigkeit. This calibration certificate may not be reproduced either than in full except with Akkreditierungsstelle GmbH and the issuing laboratory. Calibration certificate without sig. | | |
| Datum Date | 2014-11-30 | Stelle, Leiter des Kalibrierlaboratoriums Assistant head of the calibration laboratory |
| Dr. Siebert & Kühn GmbH & Co. KG • Struthweg 7-9 • D-34260 Kaufungen • Telefon 05 55 55 55 55 | | |

Prüfprotokoll / Test Certificate

| | | |
|---|---|--|
| Kalibriergesamt Calibration object | Temperatur-Mikroblockkalibrator Temperature Liquidbath Calibrator | Die für die Kalibrierung verwendeten Messumformungen werden regelmäßig überprüft und sind auf die nationalen Normale der Physikalisch- Technischen Bundesanstalt (PTB) Deutschlands oder auf andere nationale Normale. Die für diesen Vorgang erstellte Dokumentation ist erforderlich nachfolgend Kalibrierung Prüfung unverändert oder Änderung der Angabe der Werte Unterstützt Gültigkeit. The measurement regularly c- checked at national or international at this process necessary following a The test c- offer both the issuing signature |
| Hersteller Manufacturer | SIKA Dr. Siebert & Kühn GmbH & Co. KG 34260 Kaufungen | |
| Typ Type | TPM165S -25 °C / 165 °C | |
| Fabrikat/Serien-Nr. Serial number | | |
| Auftraggeber Customer | | |
| Anzahl der Seiten des Kalibrierscheines Number of pages of the certificate | 2 | |
| Datum der Kalibrierung Date of calibration | Dez 2014 | |
| Umgebungsbedingungen Ambient conditions | Raumtemperatur/ Amb. temperature (23 ± 2) Rel. Luftfeuchtigkeit/ Rel. air humidity (50 ± 2%) Luftdruck/ Amb. pressure (990 ± 5) | |
| Verwendete Normale Used standards | P1100, SN ASL-02, 3730 D-K-17734-01-00 / 201 DMM Keithley SN 596023, 0249 DKD-K-13901/ | |
| Abgleich durchgeführt mit Adjustment carried out with | Silikonöl 10 cSt Bechereinsatz Siliconoil 10 cSt lub insert | |

SIKA Dr. Siebert & Kühn GmbH & Co. KG • Struthweg 7-9 • 34260 Kaufungen
Phone +49 5505-803-0 • Fax +49 5505-803-04 • info@SIKA.net

Deutsche Akkreditierungsstelle GmbH
Beauftragte gemäß § 4 Absatz 1 Niedersächsisches Gesetz über die Akkreditierung
Unternehmensbereich der Multilateralen Akkreditierung
von EA, ILAC und IAF zur gegenseitigen Anerkennung

Akkreditierung

Die Deutsche Akkreditierungsstelle GmbH bestätigt hiermit, dass das Kalibrierlaboratorium
SIKA Dr. Siebert & Kühn GmbH & Co. KG
Struthweg 7-9, 34260 Kaufungen
die Kompetenz nach DIN EN ISO/IEC 17025:2005 besitzt, Kalibrierungen in folgenden Bereichen durchzuführen:

Mechanische Messgrößen
- Druck
- Thermodynamische Messgrößen
- Temperaturmessgrößen
- Widerstandsthermometer
- Thermopile, Thermoelemente
- Temperatur-Gleichkalibratoren
- direktanzeigende Thermometer
- Temperatursensoren und -simulatoren

Elektrische Messgrößen
- Gleichstrom- und Wechselstrommessgrößen
- Gleichspannung
- Gleichstromstärke
- Gleichstromwiderstand

Die Akkreditierungsurkunde gilt nur in Verbindung mit dem Bescheid vom 07.03.2014 mit
Akkreditierungsnummer 04-04036-01 und ist gültig bis 14.11.2019. Sie besteht aus dem
der Rückseite des Bescheides und den folgenden Anlagen mit insgesamt 3 Seiten.

Registrierungsnummer des Urkunden: 04-04036-01-01

Bescheinigung: 07.03.2014
Bescheinigungsnummer: 04-04036-01-01



Temperature calibrator requirements

Calibration task and operation locations

A temperature calibrator needs to meet a wide range of requirements: as a portable device, it has to cope with frequently changing operation locations in the test bay or in production, while being equally suitable for stationary use in the measuring workshop and testing and inspection laboratory. For this reason, the instruments must be lightweight and handy for quick and easy use on site. The weight and size are determining factors here. Furthermore, instrument durability also plays an important role.

Temperature range

Temperature sensors should be calibrated at the temperature point at which they are used. This means that the temperature calibrator must be able to cover the process temperatures of the temperature sensor under calibration and, in particular, generate the main test points. SIKA offers several temperature calibrators to cover the range from -55 °C to 1300 °C.

Efficiency and flexibility

The time and personnel required to perform the calibration task is a key index for gauging efficiency. The more efficiently things are done, the faster the return on investment in a temperature calibrator. Intuitive operation with clear displays that provide all the necessary information at a glance, along with the calibration volume and the associated re-cooling and cooling times, primarily determine the speed of the calibration. Another time-saver: a large-diameter test item holder that enables several temperature sensors to be calibrated simultaneously.

Reliable system accuracy

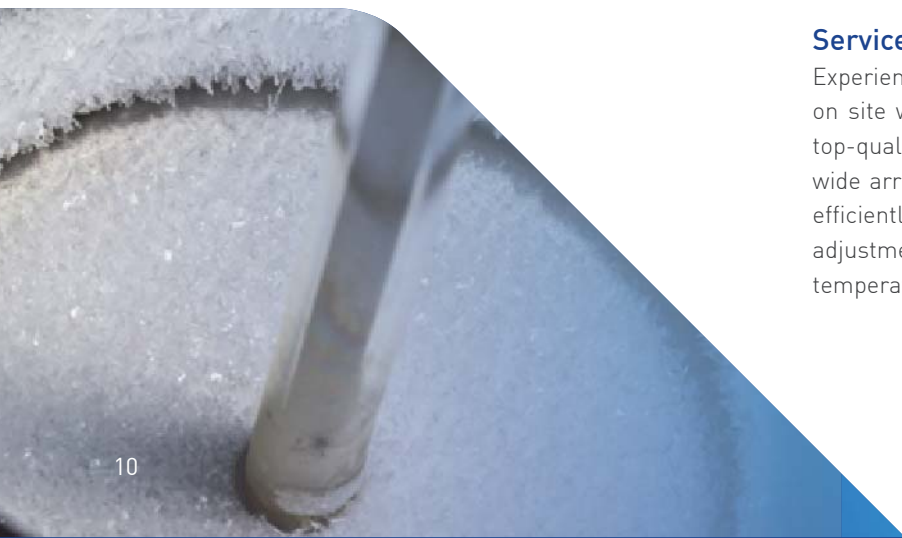
Various tests and measurement uncertainty appraisals as defined in the guidelines of the German Calibration Service (DAkkS) are performed during the production of SIKA calibrators. The measurement results are documented in comprehensive examination reports, thereby ensuring a reliable, high degree of system accuracy.

Traceability

Instruments and measuring equipment become worn from constant use. It is unavoidable that equipment ages and measured values drift as a result. Regular inspection with a factory calibration standard is absolutely essential and can be performed easily with a SIKA temperature calibrator as the calibration standard.

Services

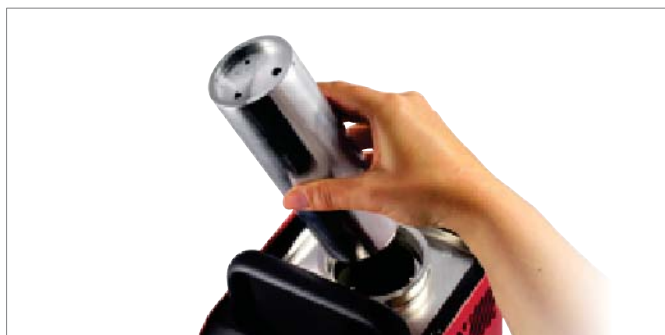
Experienced and professional consultants visit you directly on site with demo instruments, thereby ensuring you receive top-quality customer care. Furthermore, SIKA also offers a wide array of services which can generally only be performed efficiently by the manufacturer, such as recalibration, adjustments and repairs. This increases the availability of the temperature calibrators and cuts cost.



TP Basic series

The temperature calibrators in the TP Basic series have been developed for direct on-site use. With these instruments the focus is on efficiency and portability. The easy-to-use design and automatic functions have been carefully selected to facilitate operation. The result: quick, simple and efficient temperature calibrators that do not compromise on quality.

Dry block function



The optimum thermal coupling from the block to test item is achieved with the correct adapter sleeve. Ideally, the internal diameter of the sleeve is 0.5 mm larger than the outer diameter of the test item. With the aid of the adapter sleeve, straight temperature sensors of virtually any length and diameter can be calibrated. The dry block covers the entire temperature range without the need to change the calibration medium. Viscosity, flash points or outgassing are of no concern.

Adapter sleeve



Some of the dry block calibrators have a large 60 mm block borehole and can hold several test items at once.

TP 17 450

| Technical data | |
|-------------------|---|
| Type | TP 17 450 |
| Control sensor | Internal |
| Micro Bath | |
| Temperature range | |
| Tolerance | |
| Stability | |
| Measurement zone | |
| Dry block | |
| Temperature range | RT...450 °C |
| Tolerance | ±0.6 °C |
| Stability | ±0.1 °C |
| Measurement zone | 110...150 mm |
| Infrared | |
| Temperature range | |
| Tolerance | |
| Stability | |
| Measurement zone | |
| Surface | |
| Temperature range | |
| Tolerance | |
| Stability | |
| Measurement zone | |
| Block | |
| | Ø 60 mm / depth 150 mm |
| Display | |
| Display | 2-line, 4-digit display Red / green, unit °C [°F optional] |
| Display range | 0...450 °C |
| Resolution | 0.1 °C |
| General data | |
| Dimensions | |
| → Width | 150 mm |
| → Height | 330 + 70 mm |
| → Depth | 270 mm |
| Weight | Approx. 7.5 kg |
| Power supply | 230 VAC, ±10 %, 50 / 60 Hz |
| Power consumption | Approx. 2000 VA |

Type TP 17 450



Scope of delivery

- Test certificate
- Mains cable
- Insert exchange tool
- Operating manual

Optional accessories

- Transport case
- Service transport bag
- Adapter sleeve
- DAkkS certificate
- Works certificate



The TP 17 450 temperature calibrator model has a very large calibration volume.