Calibration Equipment

Our laboratory has a liquid bath, several well calibrators and tube furnaces available. Measurement data is collected using the Agilent 3485A multimeter.

Regular Laboratory Equipment Inspections

All measuring instruments, reference junctions and comparisons standards are DAkkS-calibrated annually and restorable back to national comparison standards. Regular audits, precisely defined and monitored environmental conditions and highly skilled staff facilitate high quality calibrations and the required dependability of measurement results.

Tempering Units:

-20 / 140°C	Liquid bath with appropriate medium
-80 / 125°C	Dry-well calibrator up to Ø 6 mm
+50 to +600°C	Dry-well calibrator up to bis Ø 6 mm
+300 to +1200°C	Dry-well calibrator up to bis Ø 6 mm
+200 to +1300°C	Tube furnace

Reference Sensors:

-80 to +500 °C	DAkkS-calibrated resistance thermometer
+200 to +1300 °C	DAkkS-calibrated type S thermocouple

Reference Junctions:

DakkS-calibrated, electronically controlled freezing point thermostats

Measuring Instruments:

HP3458 A digital multimeter with DAkkS calibration

Our Certificate

The GÜNTHER calibration laboratory is currently accredited for resistance thermometers and thermocouples with measurements in the range between -20°C up to 600°C. For temperatures up to 1400°C we are working with a partner laboratory, that has been accredited up to 1400°C.
We are currently in the process of expanding our accreditation for the range between -80°C up to 1300°C.


DAkkS
Deutsche Akkreditierungsstelle GmbH
Accreditation
Günther GmbH Temperaturmesstechnik
Bauhofstraße 12, 90571 Schwaig
Thermodynamic quantities
Temperature quantities
- Resistance thermometers
- Thermocouples

Our main site in Schwaig, near Nuremberg.

GÜNTHER GmbH
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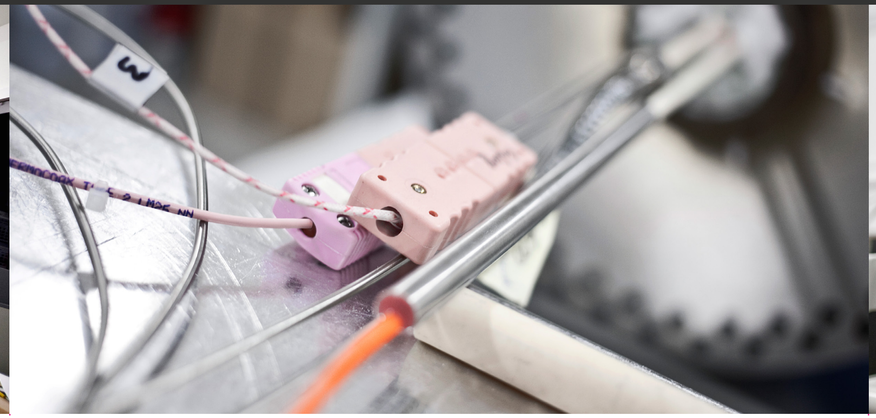
GÜNTHER GmbH
Temperature Measurement Technology

The GÜNTHER Calibration Laboratory

accredited by DAkkS

DAkkS
Deutsche Akkreditierungsstelle
D-K-15220-01-00



45 Years of Passion and Precision

Since the founding year in 1968, GÜNTHER has stood for progressive solutions in temperature measurement technology. Starting with the manufacture of electronic temperature sensors for industrial furnaces, we have continually expanded our skills and experience in a number of areas of industry, so that we are able to count ourselves among the leading manufacturers in the area of temperature measurement technology today.

In April 2014, after 20 years of persisting, the GÜNTHER Test Laboratory at our main site in Schwaig, near Nuremberg, was accredited by Germany's National Accreditation Body, the DAkkS (formerly DKD).

What is The DAkkS?

The DAkkS is the National Accreditation Body for the Federal Republic of Germany, located in Berlin.
In the past, Germany had a number of different bodies, each accrediting in various areas (temperature, pressure, Weight, etc.). Since 01 January, 2010, these different bodies were consolidated into the DAkkS as part of a new european regulation.

Pursuant to this european regulation (EG) Nr. 765/2008 and the German Accreditation Body Act (Akkreditierungsstellengesetz – AkkStelleG), the DAkkS act in the public interest as the sole provider of accreditations in Germany. The DAkkS statutory mandate is the accreditation of conformity assessment bodies (laboratories, inspection and certification bodies).

In over 4,000 accreditation procedures, the DAkkS appraises, approves and monitors the expertise of these testing centers as an independent institution. With accreditation comes the impartial validation, that these centers perform expertly and in accordance with accepted requirements.
The DAkkS assesses the assessors.

The GÜNTHER Calibration Laboratory

In the case of GÜNTHER GmbH's test laboratory, the DAkkS accreditation represents the use of standardized measurement methods and constantly audited calibration equipment. The instruments and reference elements used in measurements are newly calibrated by a higher-ranking laboratory on a regular basis.

Measurement Methods

In practice, thermometers are routinely calibrated against a reference thermometer using a comparison method. Using further comparative thermometers, this reference thermometer was calibrated at fixed-point temperatures on the ITS-90 scale. An essential requirement of the comparison method is that the thermometer to be calibrated and the comparative thermometer assume as an exactly corresponding temperature as possible. The use of tempered calibration baths as a medium for measurement have been proven themselves in this regard.
In higher temperature ranges, specialized, extensively controlled calibration ovens and dry-block calibration ovens are used.

DAkkS and Proprietary Calibrations

The calibration results are documented in a calibration certificate and the calibration object receives a calibration label.

Depending on the requirements, either the DAkkS calibration or proprietary calibration is used.
DAkkS certificates may only be issued by accredited laboratories, are regulated in guideline DakkS-DKD-5_20101221_v1.2_0 and therefore consistent. The requirements of DakkS-DKD-5 mandatory for all calibration laboratories of the German National Accreditation Body. An appropriately completed calibration certificate fulfills the requirement pursuant to standard DIN EN ISO/IEC 17025:2005 for calibration certificates and documents the restorability to the SI-Units.
A proprietary calibration certificate is an inspection certificate 3.1 pursuant to DIN EN 10204.

Your benefits:

- **Consistent, high quality standards warranted by external monitoring**
- **Independent, regular certification of laboratory and materials**
- **Highly dependable measurement results in calibration**
- **Restorability to national and international standards**
- **Internationally recognized calibration results**
- **Calibration pursuant to national and international standards and regulations.**

Starting immediately, the calibration of thermocouples and resistance thermometers can be performed in our laboratory for the following temperature ranges, pursuant to the official DAkkS guidelines:

Measurement Category Unit Under Calibration	Measurement Range / Span	Measurement Conditions / Method	Best Measurement Capability	Comments
Resistance Thermometer	-20°C to +100°C	Thermostatted Liquid Bath	0,1 K	pursuant to DAkkS / DKD 5-1
	-20°C to +200°C	Dry Well Calibrator	0,3 K	
	>200°C to +500°C		1,0 K	
Noble Metal Thermocouples	-20°C to +100°C	Thermostatted Liquid Bath	0,7 K	pursuant to DAkkS / DKD 5-3
	-20°C to +500°C	Dry Well Calibrator	1,5 K	
	≥200°C to +600°C	Tube Furnace	1,5 K	
Non-Noble Metal Thermocouples	-20°C to +100°C	Thermostatted Liquid Bath	0,7 K	pursuant to DAkkS / DKD 5-3
	-20°C to +500°C	Dry Well Calibrator	1,5 K	
	≥200°C to +600°C	Tube Furnace	1,5 K	

Proprietary Calibration Certificates can be provided for temperature ranges from -80°C to 1300°C.