

# Temperature calibrator TP 281300E

## TP Solid // Dry block // 400...1300 °C // 752 °F...2372 °F



TP 281300E

### TP 281300E - Highlights

- Very easy operation with 4-button control and integrated reference temperature sensor
- Calibration up to 1300 °C (2372 °F) - the highest temperature range on the market
- Use of extremely resilient materials for a very long service life of the block
- PC interface with connection cable to USB for use with SIKA calibration software
- Qualified for SIKA Gold Service
- Especially suitable for high temperature calibrations, especially of thermocouples

### TP Solid

With the temperature calibrators of the TP Solid series, the main focus is on **flexibility**: In addition to **dry block calibrators**, they also include **calibration baths**, with which almost any temperature sensor can be calibrated irrespective of its shape. Both can be operated **easily and intuitively**. When being used as fluid bath calibrator, the temperature sensors are directly immersed into the calibration liquid. This creates a direct temperature link

between the calibrator and the devices under test without insulating air gap. All TP Solid temperature calibrators are additionally equipped with a **serial interface for computer-assisted monitoring** of the calibration process. This flexibility in combination with the easy operation make the TP Solid series ideal for **use in machinery and plant engineering**.

### SIKA temperature calibrators

Temperature calibrators are used for the verification of the functionality and calibration of temperature measuring devices and temperature sensors. As the sole German manufacturer of these devices, we develop and produce our "Made in Germany" temperature calibrators with a special focus on **long-term reliability** and **utmost accuracy** in combination with **easy operation**. We can rely on more than 40 years of experience in doing this: SIKA's **first dry block temperature calibrator** was launched all the way back in 1980.

Every SIKA temperature calibrator is meticulously tested for **accuracy** and **stability**. This is attested by our standard calibration certificate, which we issue with every temperature calibrator, or by means of an optional DAkkS calibration certificate [German accreditation body]. This is to guarantee that you receive a **perfect product** which can be traced back to national and international temperature measurement standards.

## Features

### Easy operation

- The TP 281300E can be operated with only four buttons: Two arrow buttons for setting the target temperature, one button for confirmation and one return button
- Thus, temperatures can be set as easily as, for example, in the air conditioning system in your car
- Any operational errors can be nearly excluded. You do not need any specifically trained staff or time-consuming briefings



### TT-Scan multi-channel measuring instrument

- To calibrate devices under test that do not have their own temperature display, you need to connect them to a measuring instrument
- This is done by our TT-Scan multi-channel measuring instrument: With this instrument, you can calibrate up to eight DUTs without a display unit of their own
- The TT-Scan and the temperature calibrator are connected to a PC or laptop on which the temperatures of the DUTs are output via our PC software and evaluated.
- Compatible with DUTs with all common signals: Resistance thermometer, thermocouple and current signals
- The simultaneous calibration of several DUTs enables great time savings

### SIKA Gold Service

SIKA Gold Service provides a comprehensive service package for the regular recalibration of your temperature calibrator. You will benefit from exclusive savings and discounts as well as special promotions reserved to SIKA Gold Service members.

- You will save 33% in the recalibration of your temperature calibrator
- You will receive a 10% discount on any repairs that may become necessary
- You will receive preferential invitations to product presentations, symposia, practice days and exclusive training offers

Register now and benefit from the SIKA Gold Service: [gold-service.sika.net](http://gold-service.sika.net)



## Technical data

TP 281300E		
Temperature range	400...1300 °C at ambient temperature 20 °C	752 °F...2372 °F at ambient temperature 68 °F
Dimension of the calibration insert	Ø 28 x 200 mm (calibration insert easily exchangeable)	
Dry block		
Display accuracy	±2 °C	±3.6 °F
Temperature stability	±0.5 °C	±0.9 °F
Resolution of the temperature display	1 °C	1 °F
Reference temperature sensor	internal, fixed installation	
PC interface	RS485 (calibrator) to USB (PC)	
Dimensions		
→ Width	510 mm	
→ Height	290 mm	
→ Depth	415 + 100 mm (Handle)	
Weight	Approx. 17.5 kg	
Power supply	230...240 VAC, 50 / 60 Hz	
Power consumption	Approx. 1000 W	
Display		
Display	2-line, 4-digit digital display, red / green, unit °C / °F	

## Article numbers

To order a complete calibrator, you need two order numbers:

1. Calibrator
2. Calibration insert

In addition, depending on your individual calibration requirements, you can order additional calibration inserts, necessary certificates and other accessories.

1. Calibrator				
Temperature range	Function	Calibration insert [mm]	Power supply	Article number
400...1300 °C    752...2372 °F	Dry block	Ø28 x 200	230 V	EP28138E000003

  

2. Calibration insert				
Bore holes	Function	Calibration insert [mm]	Material	Article number
Calibration insert incl. 1 bore hole of choice	Dry block	Ø28 x 200	Kanthal	Please indicate bore holes in the order
Each additional bore hole	Dry block	Ø28 x 200	Kanthal	

  

3. Calibration certificate - Select your calibration certificates as needed		Article number
Each calibrator is already delivered with a standard calibration certificate (3 test points).		
SIKA works calibration certificate (similar to standard calibration certificate, 6 test points)		EKTPWP1FKT
DAkKS calibration certificate (3 test points + measurement uncertainty determination)		EKTPDAKKS1FKT
Each additional test point DAkKS calibration certificate		EKTPDAKKSZUSP
SIKA Gold Service works calibration certificate		EKTPGOLDWP
SIKA Gold Service DAkKS		EKTPGOLDDAKKS

  

4. Accessories	Article number
PC software (without TT-Scan)	EZ999999999971
PC software (with TT-Scan)	EZ380000000001
PC connection cable: temperature calibrator (RS485) to USB	EZ170000000002

## Overview of SIKA temperature calibrators

Temperature range (RT=Room temperature)	Function	Accuracy		Features	Block dimensions [Ø mm x depth mm]	Type
-55 °C ... 200 °C -67 °F ... 392 °F	Dry block	±0.4 °C	±0.72 °F		28 x 150	TP 17200
	Dry block	±0.2 °C	±0.36 °F	PC interface	28 x 150	TP 17200S
	Dry block	±0.2 °C	±0.36 °F	Touch screen PC interface External reference sensor Integrated measuring instrument	28 x 150	TP 37200E.2
-35 °C ... 165 °C -31 °F ... 329 °F	Dry block	±1 °C	±1.80 °F		28 x 150	TP 17165M
	Dry block	±0.4 °C	±0.72 °F		28 x 150	TP 17165
	Dry block	±0.2 °C	±0.36 °F	PC interface	28 x 150	TP 17165S
	Dry block	±0.2 °C	±0.36 °F	Touch screen PC interface External reference sensor Integrated measuring instrument	28 x 150	TP 37165E.2
	Dry block	±0.4 °C	±0.72 °F		60 x 150	TP 17166
	Dry block	±0.2 °C	±0.36 °F	PC interface	60 x 150	TP 17166S
	Calibration bath	±0.1 °C	±0.18 °F	PC interface	60 x 170	TP M165S
	Dry block Air Shield Insert Calibration bath Infrared Surface	±0.3 °C ±0.099 °C ±0.1 °C ±0.5 °C ±1 °C	±0.54 °F ±0.1782 °F ±0.18 °F ±0.9 °F ±1.88 °F	Touch screen PC interface External reference sensor Integrated measuring instrument	60 x 170	TP 3M165E.2
-10 °C ... 100 °C 14 °F ... 212 °F	Dry block	±0.05 °C	±0.09 °F	PC interface	7 x 6.5 x 150	TP 17Zero
RT ... 200 °C RT ... 392 °F	Dry block	±1 °C	±1.80 °F		18 x 150	TP 18200E
RT ... 255 °C RT ... 491 °F	Calibration bath	±0.2 °C	±0.36 °F	PC interface	60 x 170	TP M255S
	Dry block	±0.3 °C	±0.54 °F	Touch screen	60 x 170	TP 3M255E.2
	Calibration bath	±0.2 °C	±0.36 °F	PC interface		
	Infrared Surface	±0.5 °C ±1 °C	±0.9 °F ±1.8 °F	External reference sensor Integrated measuring instrument		
RT ... 450 °C RT ... 842 °F	Dry block	±0.6 °C	±1.08 °F		60 x 150	TP 17450
	Dry block	±0.3 °C	±0.54 °F	PC interface	60 x 150	TP 17450S
	Dry block	±0.3 °C	±0.54 °F	Touchscreen	60 x 150	TP 37450E.2
	Air Shield Insert	±0.2 °C	±0.36 °F	PC interface		
	Infrared Surface	±0.5 °C ±1 °C	±0.9 °F ±1.8 °F	External reference sensor Integrated measuring instrument		
RT ... 650 °C RT ... 1202 °F	Dry block	±1 °C	±1.80 °F		28 x 150	TP 17650M
	Dry block	±0.8 °C	±1.44 °F		28 x 150	TP 17650
	Dry block	±0.4 °C	±0.72 °F	PC interface	28 x 150	TP 17650S
RT ... 700 °C RT ... 1292 °F	Air Shield Insert	±0.53 °C	±0.954 °F	Touchscreen PC interface External reference sensor Integrated measuring instrument	29 x 150	TP 37700E.2
RT ... 850 °C RT ... 1562 °F	Dry block	±1 °C	±1.80 °F		18 x 100	TP 18850E
400 °C ... 1300 °C 752 °F ... 2372 °F	Dry block	±2 °C	±3.6 °F	PC interface	28 x 200	TP 281300E

Subject to technical modifications and errors

