

# Temperature calibrator TP 17650S

TP Solid // Dry block // Room temperature...650 °C // RT...1202 °F



TP 17650S



## Highlights

- Very easy operation with 4-button control and integrated reference temperature sensor
- PC interface with connection cable to USB for use with SIKA calibration software
- Low weight and stable handle for easy transport
- Optional accessory: Transport case with or without trolley
- Especially suitable for simple and fast calibrations up to 650 °C (1202 °F)

## 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 17650S 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









## 5-Year Warranty: Low Maintenance, Comprehensive Service!

With regular service and adherence to the SIKA recalibration recommendation, you receive a 5-year warranty.

- Instead of annual recalibration, recalibration is only necessary every 500 operating hours or every three years thanks to long-lasting SIKA technology.
- This results in only 1/3 of the usual maintenance costs.
- Significant reduction in the total cost of ownership.



# Technical data

TP17650S		
<b>Temperature range</b>	Room temperature...650 °C	Room temperature...1202 °F
<b>Dimension of the calibration insert</b>	Ø 28 x 150 mm (calibration insert easily exchangeable)	
Dry block		
<b>Accuracy</b>	±0.4 °C	±0.72 °F
<b>Temperature stability</b>	±0.05 °C	±0.09 °F
<b>Resolution of the temperature display</b>	0.01 °C in the range room temperature...99.99 °C, else 0.1 °C	0.01 °F in the range room temperature...99.99 °F, else 0.1 °F
<b>Reference temperature sensor</b>	internal, fixed installation	
<b>Interface</b>	RS485 (calibrator) to USB (PC)	
<b>Connectivity</b>	MODBUS	
Dimensions		
→ Width	150 mm	
→ Height	330 + 70 mm (Handle)	
→ Depth	270 mm	
<b>Weight</b>	Approx. 7.5 kg	
<b>Power supply</b>	100...240 VAC, 50 / 60 Hz	
<b>Power consumption</b>	Approx. 1000 W	
Display		
<b>Display</b>	2-line, 4-digit digital display red / green, unit °C / °F	
Approvals		
	     	

# Article numbers

To order a complete calibrator, you need two article 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
Room temperature...650 °C	RT...1202 °F	Dry block	Ø 28 x 150	100...240 V	EP17650S281503

2. Calibration insert				
Bore holes [mm]	Function	Calibration insert [mm]	Material	Article number
1x Ø 3.5, 1x Ø 6.5, 1x Ø 13.5	Dry block	Ø 28 x 150	Brass	EZ15028B03MS17
1x Ø 6.5	Dry block	Ø 28 x 150	Brass	EZ15028065MS00
2x Ø 3.5	Dry block	Ø 28 x 150	Brass	EZ15028B02MS09
1x Ø 3.5, 1x Ø 4.5	Dry block	Ø 28 x 150	Brass	EZ15028F02MS80
1x Ø 3.5, 1x Ø 6.5	Dry block	Ø 28 x 150	Brass	EZ15028H02MS01
1x Ø 3.5, 1x Ø 8.5	Dry block	Ø 28 x 150	Brass	EZ15028B02MS67
1x Ø 3.5, 1x Ø 6.5, 1x Ø 8.5, 1x Ø 10.5	Dry block	Ø 28 x 150	Brass	EZ15028C04MS15
Without bore holes	Dry block	Ø 28 x 150	Brass	EZ15028000MS00
Calibration insert incl. 1 bore hole of choice	Dry block	Ø 28 x 150	Brass	Please indicate bore
Each additional bore hole	Dry block	Ø 28 x 150	Brass	holes in the order

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

4. Accessories		Article number
Transport case without trolley		EZTPKOFFER20
Transport case with trolley		EZTPKOFFER20TG
Transport bag		XE2193
PC software		EZ999999999971
PC connection cable: temperature calibrator (RS485) to USB		EZ170000000002

# Overview of SIKA temperature calibrators

## Our series: Basic. Solid. Premium.

- **Dry block calibrators** of the **TP Basic** series impress with their **uncomplicated operation** and **high cost-effectiveness**. They are particularly suitable for use on ships or in industrial applications.
- Equipped with a **PC interface**, the **dry block calibrators** and **calibration baths** of the **TP Solid** series cover a wide temperature range with high accuracy.
- For the highest demands on accuracy and flexibility: The dry-block and multi-function temperature calibrators of the **TP Premium** series represent the pinnacle of our technical development. Equipped with an **integrated touch screen**, a **PC interface**, an **external reference sensor** and **integrated measuring instrument**, this series offers **extreme accuracies** for **all calibration tasks**.

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	TP Basic	28 x 150	TP 17200
	Dry block	±0.2 °C	±0.36 °F	TP Solid	28 x 150	TP 17200S
	Dry block	±0.1 °C	±0.18 °F	TP Premium	28 x 150	TP 37200E.2
-35 °C ... 155 °C -31 °F ... 311 °F	Calibration bath	±0.1 °C	±0.18 °F	TP Solid	60 x 170	TP M165S
-35 °C ... 165 °C -31 °F ... 329 °F	Dry block	±1 °C	±1.8 °F	TP Basic	28 x 150	TP 17165M
	Dry block	±0.4 °C	±0.72 °F	TP Basic	28 x 150	TP 17165
	Dry block	±0.2 °C	±0.36 °F	TP Solid	28 x 150	TP 17165S
	Dry block	±0.1 °C	±0.18 °F	TP Premium	28 x 150	TP 37165E.2
	Dry block Air Shield Insert Calibration bath Infrared Surface	±0.1 °C ±0.07 °C ±0.19 °C ±0.5 °C ±1 °C	±0.18 °F ±0.126 °F ±0.342 °F ±0.9 °F ±1.8 °F	TP Premium	60 x 170	TP 3M165E.2
-30 °C ... 165 °C -22 °F ... 329 °F	Dry block	±0.4 °C	±0.72 °F	TP Basic	60 x 150	TP 17166
	Dry block	±0.2 °C	±0.36 °F	TP Solid	60 x 150	TP 17166S
-10 °C ... 100 °C 14 °F ... 212 °F	Dry block	±0.05 °C	±0.09 °F	TP Solid	7 x 6.5 x 150	TP 17Zero
RT ... 200 °C RT ... 392 °F	Dry block	±1 °C	±1.8 °F	TP Basic	18 x 150	TP 18200E
RT ... 255 °C RT ... 491 °F	Calibration bath	±0.2 °C	±0.36 °F	TP Solid	60 x 170	TP M255S
	Dry block Air Shield Insert Calibration bath Infrared Surface	±0.25 °C ±0.08 °C ±0.18 °C ±0.5 °C ±1 °C	±0.45 °F ±0.144 °F ±0.324 °F ±0.9 °F ±1.8 °F	TP Premium	60 x 170	TP 3M255E.2
	Dry block	±0.6 °C	±1.08 °F	TP Basic	60 x 150	TP 17450
	Dry block	±0.3 °C	±0.54 °F	TP Solid	60 x 150	TP 17450S
RT ... 450 °C RT ... 842 °F	Dry block Air Shield Insert Infrared Surface	±0.25 °C ±0.2 °C ±0.5 °C ±1 °C	±0.45 °F ±0.36 °F ±0.9 °F ±1.8 °F	TP Premium	60 x 150	TP 37450E.2
	Dry block	±1 °C	±1.8 °F	TP Basic	28 x 150	TP 17650M
	Dry block	±0.8 °C	±1.44 °F	TP Basic	28 x 150	TP 17650
RT ... 650 °C RT ... 1202 °F	Dry block	±1.2 °C	±2.16 °F	TP Basic	13.5 x 110	TP Basic Marine
	Dry block	±0.4 °C	±0.72 °F	TP Solid	28 x 150	TP 17650S
RT ... 700 °C RT ... 1292 °F	Dry block Air Shield Insert	±0.43 °C ±0.27 °C	±0.744 °F ±0.486 °F	TP Premium	29 x 150	TP 37700E.2
	Dry block	±1 °C	±1.8 °F	TP Basic	18 x 100	TP 18850E

Subject to technical modifications and errors