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Омск (3812)21-46-40  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16  
Казахстан (772)734-952-31

Пермь (342)205-81-47  
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Ярославль (4852)69-52-93

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## Temperature & Pressure **CALIBRATION SOLUTIONS**



# Wherever you measure

- we are there!

## Product advantages & typical applications

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## Why calibrate?

Temperature and pressure are among the most measured variables in technology, which is why the interest in exact and reliable measurement is particularly high.

But even the best sensor or transducer changes its characteristic properties through a wide variety of influences. This drift cannot be prevented and the display values are incorrect. These deviations can be determined by calibration and documented with a certificate. All sensors that have a significant influence on the process should be calibrated before commissioning and then at regular intervals. Often these calibrations are also specified by guidelines and standards.

Our products in the field of calibration technology have been developed and manufactured with regard to long-term reliability, highest quality and according to DAkkS requirements. Thanks to our accredited calibration laboratory, we can supplement our extensive product range with an extensive range of services.



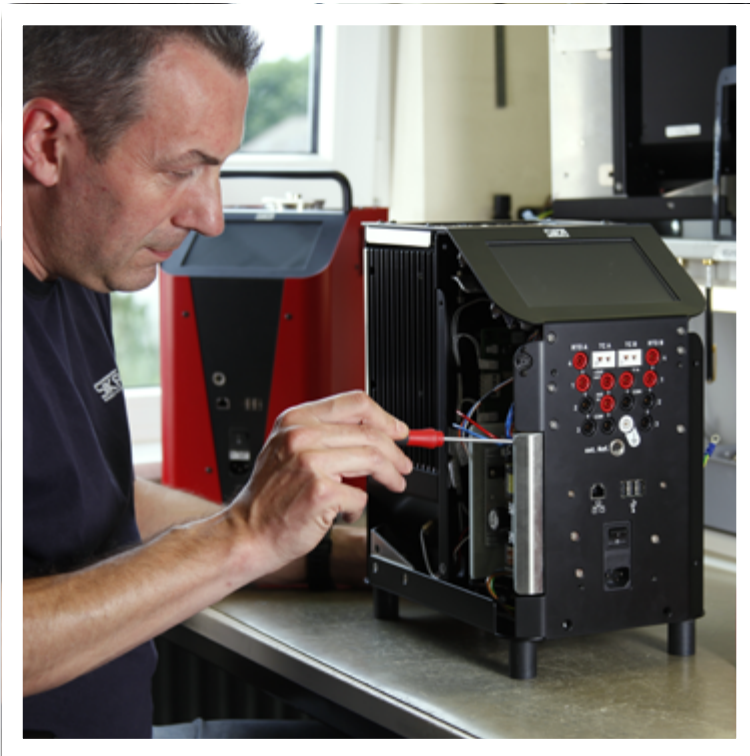
# You benefit

from our experience as manufacturer

## Innovation & Tradition - The key to success

SIKA calibrators have been setting standards in calibration technology since the early 1980s. Together with PTB we have developed the guideline R5-4 for the calibration of temperature dry well calibrators. As a family business still managed by the 4th generation, we combine tradition and innovation and stand for forward-thinking trends in calibration technology.

- Innovative testing and production technologies
- Solution-oriented, responsive design department
- Continuously growing and powerful development department
- Continuous process optimization (e.g. DIN EN ISO 9001, KaiZen)
- Further development of market-driven series



# OEM solutions

## The right product for your assortment

There are only a few limits to the adaptation of our products. By detailed arrangements our calibrators can be adapted technically as well as optically to your wishes. This creates individual measuring instruments that match your corporate design, meet your technical requirements and fit seamlessly into your product range.

## Examples of modifications

- Temperature and pressure ranges
- Special calibration sleeves
- Programmings & Software
- Language versions (all languages)
- Individual interface configuration
- Menu operation, Shape & Colour

“ Many well-known manufacturers worldwide rely on SIKA calibration technology „Made in Germany“. Benefit from our know-how and let the „SIKA heart“ beat in your products. ”



# On-site expertise

In service for you worldwide

## Technical sales in the field\*

Personal advice on site is the foundation for a successful cooperation. That is why we have high demands on our technical sales staff operating throughout Germany: They have a technical background, comprehensive product knowledge and, with their many years of experience, stand for competent advice and extensive application knowledge.

Their proximity to customers and markets enables us to offer solutions tailored to your individual requirements. On the basis of extensive product training and the regular exchange of experience with product specialists in the office, we are able to guarantee the high quality of advice provided by our field service.

## Service

- Demonstration devices and individual on-site consultation
- Recalibration and adjustment
- Certificates
- Repair and maintenance
- Free disposal of old equipment



\* Available in Germany, Austria and Switzerland

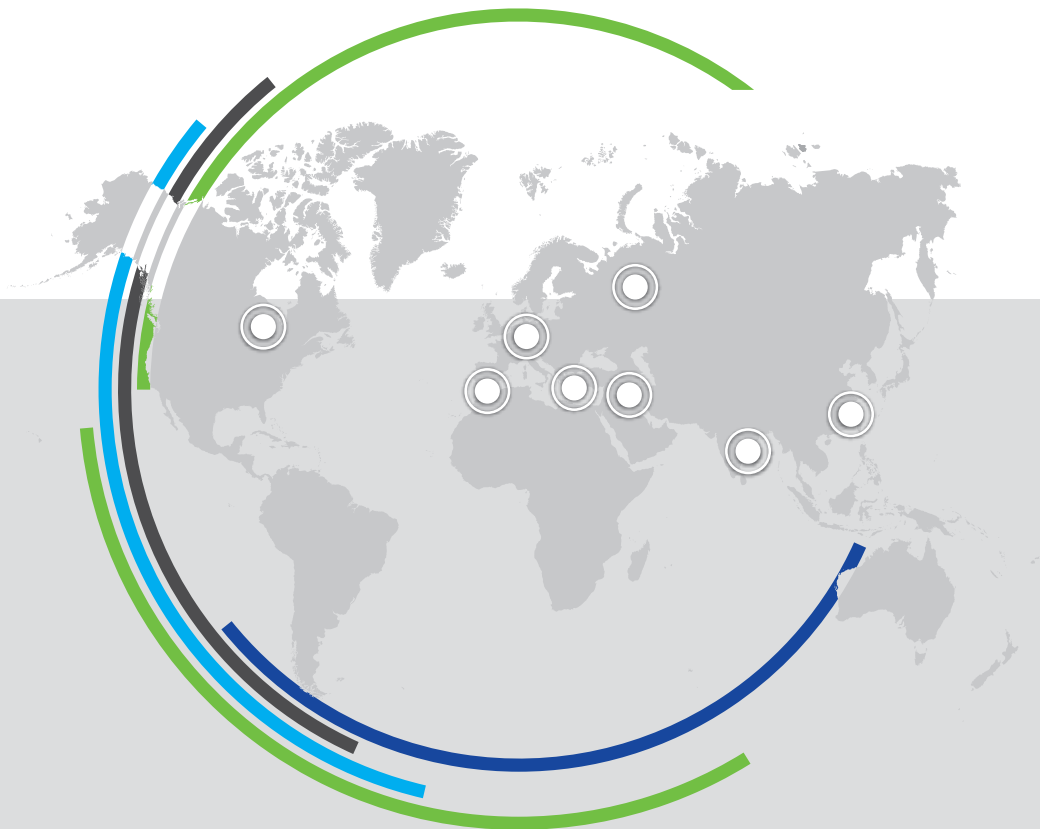
“ *With our extensive network of sales partners all over the world, we currently achieve an export quota of around 55 %.* ”

### Worldwide network of sales partners

Thanks to the intensive work of our business development, our export quota has steadily increased in recent years. The insights gained into regional markets have also had a positive influence on the development of new products.

Our steadily growing dealer network enables us to offer our customers abroad a high-quality local service: Customers in the marine industry can have their calibrators recalibrated in specially set up service points. Specially certified „Calibration Service Partners“ offer comprehensive service for industrial customers.

Regular workshops, training and further education at our headquarters in Kaufungen ensure a regular exchange of market-relevant know-how and knowledge of the latest product developments.



# Calibration means

## reliability for you and your customers

### You calibrate on site - with SIKA

- The use of portable devices enables the thermometer check directly in the plant. This reduces downtime to a minimum and also eliminates the transport risk associated with laboratory dispatch.
- The on-site solution also offers a control advantage: It determines not only the measurement error from the sensor, but also that of the entire measurement chain.

“ We will be pleased to advise you on the selection of the right instrument and on the safe performance of calibration tasks in practice. ”

### Increasing demands on measuring equipment

In addition to numerous guidelines and legal regulations (HACCP, FDA, EHEDG, ATEX,...), internal specifications and certifications (ISO, TÜV,...) often play a central role in every company in complying with precise measurement values. Only regularly calibrated sensors guarantee their accuracy and thus ensure long-term operational reliability. No matter whether stationary in the calibration laboratory or in the field applications directly at the measuring point, SIKA calibrators support you.

- Compliance with limit values
- Avoidance of failures and downtimes
- Minimize maintenance times
- Quality assurance and control
- Traceability and documentation
- Audit security





“ *Manufacturer-independent recalibration and maintenance of your test equipment with all our experience from over 115 years as a manufacturer for measuring instruments.* ”

## We calibrate for you - recalibration at SIKA

We recalibrate your test equipment according to the DAkkS standard.

### Temperature laboratory

- Accredited for the temperature range of -30...1300 °C.
- In this measuring range thermocouples, indicating temperature measuring and testing devices as well as dry-block calibrators can be calibrated.
- Resistance thermometers can be calibrated in the range of -30...960 °C.

### Pressure laboratory

- The calibration laboratory for the measured variables “absolute pressure and positive pressure” for the calibration of indicating analogue and digital pressure measuring instruments as well as pressure sensors with electrical output signal such as 0...10 V or 4...20 mA.
- Calibration is performed as a comparison measurement against a DAkkS reference standard piston pressure gauge with defined pressures in the range of 1...1200 bar.
- The smallest possible measurement uncertainties are 0.7 mbar, depending on the measuring range.

### Laboratory for electrical quantities

- Resistors and resistance measuring instruments can be calibrated in the range of 0...2 kΩ. Depending on the resistance value, the smallest possible measurement uncertainty is 0.1 mΩ
- DC voltage measuring devices and transmitters can be calibrated in the range of 0...20 VDC with the smallest possible measurement uncertainty from 2 μV onwards.
- DC testing and measuring devices for standard signals (0)4...20 mA can be calibrated with the smallest possible measurement uncertainty starting at 0.05 μA

# Temperature calibrators

## Multifunction

- Easy switching between
  - Dry block function
  - Microbath function
  - Infrared function
  - Surface function

### Your benefit:

- Universal application
- One multifunction calibrator can replace up to four standard instruments

## Modern operating concept

- Intuitive operation of calibration functions
- Easy management of calibration data on the calibrator
- High robustness

### Your benefit:

- Quick calibrator setup
- All functions at a glance

## Practical accessories e.g. barcode reader

- Fast database access
- Simplification of data search

### Your benefit:

- Efficient working
- Error minimization

## LAN / WLAN connection

- Data exchange between calibrator and terminal (e.g. PC)
- Accessible remote access to data and processes without software driver installation (web application)

### Your benefit:

- Simple calibrator setup with specific calibration tasks
- Monitoring of calibration orders no longer location-dependent



The scope of services varies depending on the model, please note the technical data.

### Status control

→ Model-based multi-variables control system with predictive temperature control

#### Your benefit:

→ Fastest stabilization times on the market  
→ Unique control stability in the mK range

### Calibration tasks

→ Creation of calibration tasks that can be reused at any time

#### Your benefit:

→ Efficient working  
→ Simplified handling, even for complex calibration procedures

### Bootloader

→ Allows software extensions of the calibrator

#### Your benefit:

→ Simple software updates on site  
→ Future security

### Overview of functions

Series	TP Basic	TP Solid	TP Premium
Dry block	✓	✓	✓
Micro calibration bath		✓	✓
Multifunctionality			✓
Resolution	0.1...1 °C	0.01...1 °C	0.001...0.01 °C
Accuracy	0.4...1 °C	0.2...2 °C	0.1 °C...0.3 °C
Internal reference sensor	✓	✓	✓
PC interface		✓	✓
External reference sensor			✓
Integrated measuring instrument			✓

# Temperature calibrators

## The series



### TP Basic

#### Sophisticated technology - easy handling

Efficiency and portability characterize the temperature calibrators of the TP Basic series. This series consists of dry-block calibrators that cover a wide temperature range and are used on site. Designed to ensure convenient calibration of temperature sensors, they impress with their simple operation and the sophisticated use of various automated functions. The optimum thermal coupling from the block to the test piece is achieved by a precisely matched transition sleeve. This sleeve can be manufactured according to customer specifications and thus enables the simultaneous calibration of a wide range of temperature sensors.

### TP Solid

#### Higher accuracies and special designs

Flexibility is at the forefront of the TP Solid series of temperature calibrators: In addition to dry-block calibrators with the highest accuracy, there are also microcalibration baths with which almost any temperature sensor can be checked regardless of its shape. Both offer a simple and intuitive operation as well as quick access to extensive functions. Here you will also find suitable products for calibrating zero point and high temperature.



**Multifunction (TP Premium)** → Dry block - Microbath - Infrared - Surface





## TP Premium

### Fastest calibration and hybrid technology

Optimum performance, superior ease of use and multiple calibration functions characterize the calibrators of the TP Premium series. With the help of the intuitive menu structure, all necessary entries can be made quickly and easily, whether on a coloured, graphic-capable display or the generous touch screen. A constantly growing range of supported temperature ranges covers more and more temperature sensors on the market. These can be calibrated with a resolution of up to 0.001 °C and thus meet the highest demands, e.g. in the food and pharmaceutical industries. The extensive accessory program of the TP Premium series allows time-saving calibration setups.

- Patented control technology (time saving up to 50 %)
- World's fastest dry-block temperature calibrators
- Hybrid technology (Peltier elements and heating cartridges)
- Wide temperature range with cooling and heating function on the market
- Fastest stabilization times on the market
- Patented touch screen function
- Gauge management with barcode scanner (accessory)
- Stability up to 0.001 °C

### 50 % faster

Experience and knowledge from space travel make the innovative temperature calibrators of the TP Premium series the fastest and temperature-stable calibrators on the market. They are equipped with a temperature controller based on a completely new operating principle. In contrast to the functionality of conventional calibrators, the properties of the test object are modelled virtually here. Due to a special control algorithm, a significantly shorter calibration time and a temperature stability in the millikelvin range, unique for portable calibrators, are achieved.

„Time is money“ - the advantages for the user are obvious: Shorter calibration times mean shorter machine downtimes. Depending on the production process, considerable cost savings are possible by using TP Premium calibrators.

- Reduction of waiting times before reaching the thermal balance from approx. 30 minutes to 25 to 15 minutes.
- Energy savings over the service life of a temperature calibrator of up to 5 MWh.
- Reliable achievement of the thermal equilibrium, so that unnecessary calibration uncertainties are avoided.



# Pressure calibrators

## Regulation

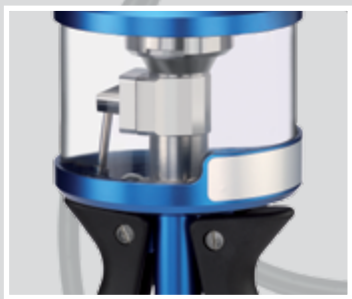
- Ultra-fine thread pitch
- Stepless pressure generation
- Tool-free switching between vacuum and overpressure

### Your benefit:

- Precise and simple regulation in the mbar range

## Pneumatic or hydraulic

- Pneumatic test pumps for Low and medium pressure range
- Hydraulic test pumps for Medium and high pressure range
- Oil-free up to 1000 bar



The scope of services varies depending on the model, please note the technical data.



### Reference pressure gauge

- Temperature compensated measuring cells and electronics
- Up to 13 unit characters
- Measuring ranges between -1...2500 bar

#### Your advantage:

- Suitable reference pressure gauges for almost all required measuring ranges



### Overview pressure generation

Function	Type	Pressure range	Air	Oil	Water
<b>Hand test pump</b>	P 4	-0,3...4 bar	✓		
	P 40.2	-0,95...40 bar	✓		
	P 60	-0,95...60 bar	✓		
	P 700.3	0...700 bar		✓	✓
	P 1000.2	0...1000 bar		✓	✓
<b>Table-top test pump</b>	P 700 T	0...700 bar		✓	
	P 700.G2	0...700 bar		✓	
	P 700.GW	0...700 bar			✓
	P 1000.G	0...1000 bar		✓	
	P 1000.GW	0...1000 bar			✓
	P 1400.G	0...1400 bar		✓	

### Manual pressure generation

- Smooth-running pressure generation thanks to ergonomic handles
- Operation without additional power supply

#### Your advantages:

- Immediate on-site use

# Pressure calibrators =

## Test pumps + reference pressure gauge

Pressure calibration is the comparison between the displayed values of a pressure measuring device and the display values of a pressure standard whose accuracy is known. Often the device to be tested cannot be removed from the running process. To avoid long downtimes, the calibration is carried out on site. For a prescribed function test or for accuracy control, the test item is connected to the hand test pump or table test pump, e.g. by means of a pressure hose. Digital pressure gauges with highest precision serve as compact reference instruments.

SIKA offers you a complete range of pressure calibrators for a wide variety of applications, enabling you to efficiently perform virtually any test and calibration task.



“ With the right combination of pressure generation and reference pressure gauge, on-site calibrations can be carried out very quickly and cost-effectively in everyday use. ”



## Basic

### For beginners and professionals

Whether to supplement your existing equipment or as an introduction to pressure calibration, each test pump includes a suitable pressure hose in the Basic version. The hoses of the hydraulic pumps are equipped with a self-sealing quick coupling.

## Solid

### Well equipped for use in the field

The Solid full version is available in a sturdy transport case for all common connection threads inch, conical or metric adapters as well as a suitable sealing kit. Depending on the pump, the case also offers space for up to two pressure references\*.



\* Reference pressure gauges are available separately as required.

# Test pumps

## Hand test pumps and table-top units

### Requirements for pressure sources

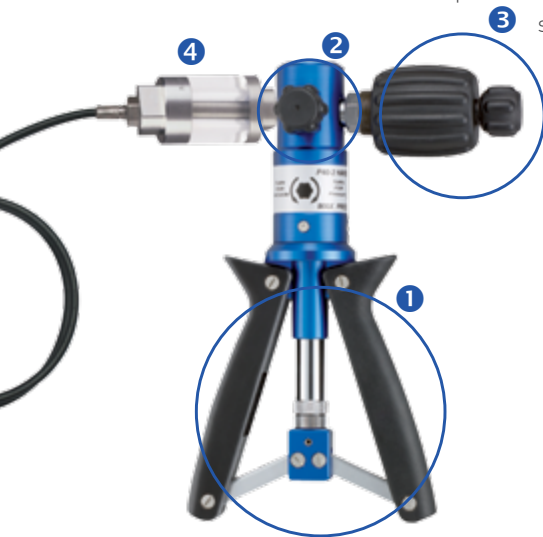
Essential requirements for manual pressure generation are:

- Simple adaptation of test specimens
- Uncomplicated and easy pressure build-up
- Maintenance-free operation

These aspects were of course taken into account and optimally implemented in the design of our test pumps.

### The test pumps

Air, water or oil are used as pressure media. Air is the ideal test medium, especially in areas of application where the test object is not wetted or no aggressive or ionizing substances may be used. Depending on the desired pressure range, you have the choice between the mobile hand pumps or the portable table devices when it comes to stationary use. In contrast to complex and sensitive plate scales, the table-top test pumps do not have to take gravity or complicated alignment into account, as a direct comparison measurement is carried out. Another advantage of all models is the one-handed operation with handle, lever or spindle, which also makes frequently occurring test runs ergonomic.



### Pneumatic

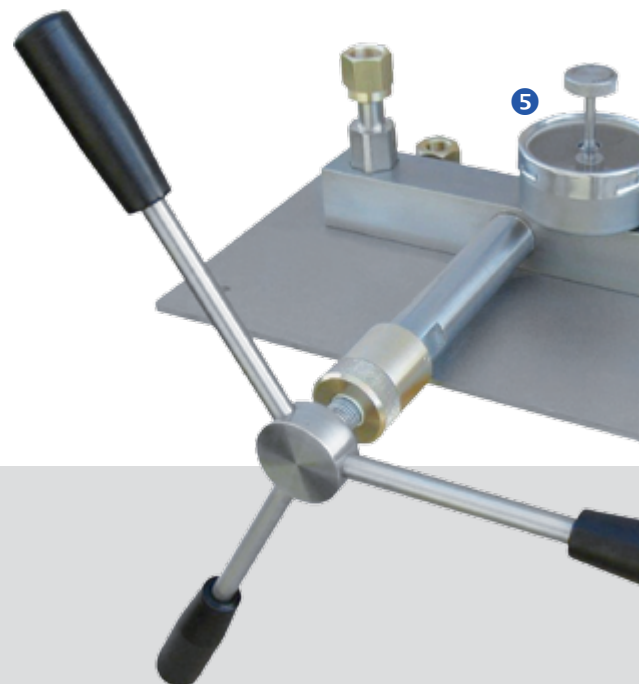
The pneumatic test pumps by SIKA meet requirements that other suppliers can often only cover with several pumps.

- 1 The pressure build-up in the medium pressure range up to 60 bar by means of a handle is unique.
- 2 The integrated negative pressure generation enables working in the vacuum range up to -950 mbar. The change from overpressure to negative pressure generation takes place without additional tool directly with a change-over valve.
- 3 For precise adjustment in the low mbar range, a large volume control valve with ultra-fine thread pitch is used, thus enabling settings in the precision pressure range.
- 4 Dirt trap (accessory) - prevents the transfer of the smallest dirt particles and moisture from a test specimen to the pump (up to 35 bar).

### Hydraulic

The easy-to-operate hydraulic test pumps have been specially developed for the medium to high pressure range.

A built-in reservoir 5 serves as a receptacle for the hydraulic fluid. Depending on the version, pressures from 700 bar up to 1400 bar can be generated.



# Reference pressure gauges

## Digital pressure gauges or hand-held measuring instruments

### The reference pressure gauges

Digital pressure gauges are particularly well suited for both stationary and mobile measurement and display of pressures. Its use as a pressure reference makes it easy to check, set and calibrate other pressure measuring devices directly on site. The high accuracy in signal acquisition is achieved by powerful measuring cells with electronic linearization of the characteristic curve. The right instruments are available for extensive measuring tasks.

### Advantages at a glance

- Accurate and reliable measurement
- High operational readiness
- Easy and fatigue-free reading with illuminated display
- Very well suited for difficult on-site use
- Uncomplicated use, simple installation
- Added value through additional functions
- Ex versions

### Direct mounting or built-in version

The compact, handy design proves itself in daily use. Large diameters of up to 250 mm, as is usual with precision manometers, are a thing of the past.

The small space requirement simplifies direct installation. If necessary, installation versions for front mounting in control cabinets or operating panels are available.





### Energy supply industry

- Maintenance / Servicing
- Compliance with safety limits for temperatures and pressures
- Compliance with operating times and downtimes
- Process documentation

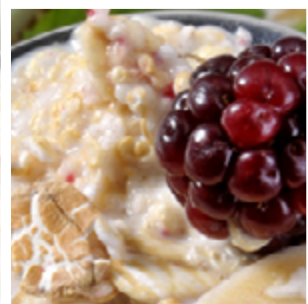


# At home in your



### Medical engineering

- Maintaining sterile temperatures
- Climate control
- Plant engineering



### Food

- Adherence to product quality
- Check complete measuring chain
- Hygiene control



### Pharmaceuticals & chemicals

- Process monitoring
- Temperature zone testing
- System cleaning





### Marine sector

- Exhaust gas temperature monitoring
- Cooling water monitoring
- Condition monitoring
- Recalibration on board

# industry!



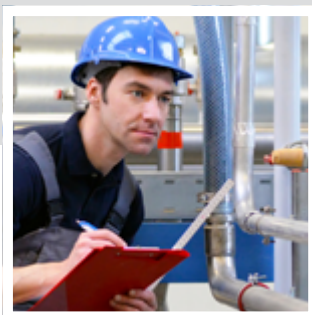
### Your Branch

- For precise pressure and temperature measurement
- For a longer lifetime of your machines and plants
- For your process documentation



### Automotive

- Maintenance of test benches
- Sensor testing of vulcanization systems



### Calibration service

- On-site calibration
- Laboratory use

# Energy supply industry

Power generation & district heating

## Recommended products

- Temperature calibrators
  - TP Basic dry block calibrator for temperatures up to 850 °C
  - TP Solid micro calibration bath for temperatures up to 225 °C
- Pressure calibrators
  - Pneumatic hand test pumps for pressures up to 60 bar
  - Hydraulic hand test pumps and pressure generators for pressures up to 1400 bar
  - Digital reference pressure gauges with data logger



“ *The compact and transportable temperature and pressure calibrators can also be used comfortably in difficult places.* ”



## Application examples

- Maintenance and servicing of safety temperature limiter
- Compliance with safety limits for exhaust gas temperature measurement
- Heating and cooling water monitoring
- Testing of pressures in steam pipes
- Compliance with operating times and downtimes
- Process documentation



# Food

## Processing, storage & transport

### Recommended products

- Temperature calibrators
  - TP Premium dry block calibrator for temperatures from -55 °C up to 650 °C, with hygienic touch display
  - TP Premium micro calibration bath for special shapes and custom sensors for temperatures from -35 °C up to 165 °C
  - Special adapter sleeve for aseptic sensors
- Pressure calibrators
  - Pneumatic hand test pumps for pressures up to 60 bar
  - Hydraulic hand test pumps and pressure generators for pressures up to 700 bar
  - Digital reference pressure gauges with data logger

“ Aseptic sensors can also be fully accommodated in our special dry-block calibration sleeve thanks to the unique stepped bore. Due to the even temperature distribution, measuring errors are avoided!

”





## Application examples

- Hygiene monitoring in cooking lines, filling plants and packaging lines
- Check measuring chain
- Documentation and compliance with consistent product quality
- Compliance with safety limits in temperature-critical areas
- Reduction of maintenance periods and downtimes
- Cold chain monitoring



# Pharmaceuticals & chemicals

Production & laboratory applications

## Recommended products

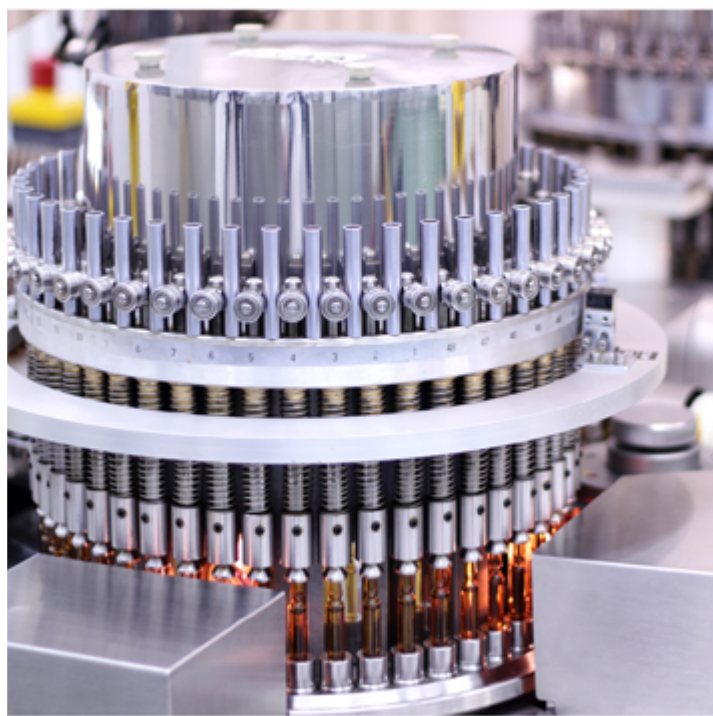
- Temperature calibrators
  - TP Premium dry block calibrator for temperatures from -55 °C up to 200 °C, with hygienic touch display and patented control technology
  - TP Premium multifunction bath inclusive infrared and surface function and customer-specific linearization
- Pressure calibrators
  - Pneumatic hand test pumps for pressures up to 60 bar
  - Hydraulic hand test pumps and pressure generators for pressures up to 700 bar
  - Digital reference pressure gauges with data logger, intrinsically safe

“ Check every sensor in your system with only one calibrator! Multifunctional calibrators with dry block, microbath, infrared and surface function. ”



## Application examples

- Hygiene monitoring, filling plants and packaging lines
- Check measuring chain
- Documentation and compliance with consistent product quality
- Process monitoring
- Temperature zone testing
- Plant cleaning



# Medical engineering

Production, research & development

## Recommended products

- Temperature calibrators
  - TP Premium dry block calibrator for temperatures from -55 °C bis 200 °C, with hygienic touch display and patented control technology
  - TP Premium multifunction bath for special shapes and custom sensors, incl. infrared and surface function and stability up to 0.001 °C
- Pressure calibrators
  - Pneumatic hand test pumps for pressures up to 60 bar
  - Hydraulic hand test pumps and pressure generators up to 1000 bar for on-site and laboratory use
  - Digital reference pressure gauge with data logger and highest accuracy

“ *Faster validation processes by simultaneous calibration of up to 57 probes with highest accuracy.* ”



## Application examples

- Compliance with quality standards, guidelines and certifications
- Calibration within the scope of GDP (Good Distribution Practice)
- Temperature monitoring in freezers/chambers, ovens and heating cabinets
- Temperature maintenance and monitoring in sterilization equipment, cleaning and disinfection systems
- Climate control
- Plant construction and maintenance
- Process documentation



# Automotive

## Production & quality assurance

### Recommended products

- Temperature calibrators
  - TP Basic Dry block calibrator for temperatures up to 850 °C,
  - TP Premium Dry block calibrator for temperatures from -55 °C up to 650 °C, with hygienic touch display
- Pressure calibrators
  - Pneumatic hand test pumps for pressures up to 60 bar
  - Hydraulic hand test pumps and pressure generators up to 1400 bar

“ Save time during quality inspection thanks to automated calibration. You just program your test points - the rest is done by the calibrator!

”



## Application examples

- Temperature measurement in test benches
- Temperature and pressure monitoring in vulcanization plants
- Documentation and compliance with consistent product quality
- Reduction of maintenance and downtimes
- Process monitoring



# Marine sector

## Measuring & monitoring on board

### Recommended products

- Temperature calibrators
  - TP 17650M dry block calibrator for temperatures up to 650 °C, compact design for on-site use
  - TP 17165M dry block calibrator for temperatures from -35 °C up to 165 °C
- Pressure calibrators
  - Pneumatic hand test pumps for pressures up to 60 bar, light and compact for mobile use
  - Hydraulic hand test pumps and pressure generators up to 1000 bar
- Rekalibration set
  - Digital hand-held calibrator
  - Digital reference pressure gauge
  - Temperature reference sensor



“ *Easy handling even under harsh environmental conditions.  
Ready for use at any time!* ”



## Application examples

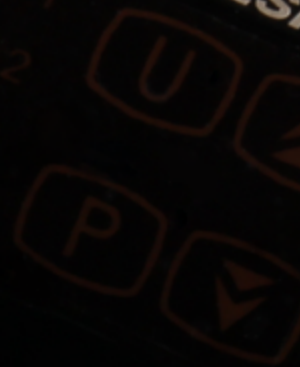
- Exhaust gas temperature measurement
- Temperature monitoring in the engine, e.g. cylinder oil and cooling water
- Turbocharger/charge air  
Temperature & pressure monitoring
- Maintenance and servicing of mobile and stationary measuring instruments
- Hold temperature monitoring and documentation
- Compliance with limit values for emissions and international maintenance and safety standards (SOLAS, ISM,...)



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ACHTUNG! HOHE TEMPERATUR  
ATTENTION! HIGH TEMPERATURE  
高温注意



# Technical data

## Temperature calibrators

→ TP Premium	
• TP3M	36
• TP37	42
• TP38	48
→ TP Solid	
• TP17	50
• TP17 / 28	54
• TPM	56
→ TP Basic	
• TP17	60
• TP17 Marine	64
• TP18	68
→ Accessories	70

## Pressure calibrators

→ Pneumatic hand test pumps	
• P40.2 / P60	76
• P4	78
→ Hydraulic hand test pumps	
• P700.3 / P1000.2	80
→ Hydraulic table top test pumps	
• P700T / P700G / P1000G / P1400G	82
→ Digital reference pressure gauges	
• Type E2 / D2 / C2	84
• Type E-Ex / D-Ex / L-Ex	88
• Type J	90
• Type P	92
→ Accessories	94

# TP 3M // Multifunction // -35...255 °C



Type	Highlights
TP 3M165E.2	Patented control technology - time saving up to 50% High calibration volume Fastest stabilisation times on the market Patented touchscreen function Management of device under test with barcode scanner (Accessories) Optional with stainless steel case (for pharmaceutical and food industry)

Technical data					
Type	TP 3M165E.2			TP 3M255E	
Temperature range*	-35...165 °C -25...150 °C (at surface calibration)			RT...255 °C RT...200 °C (at surface calibration)	
Reference sensor (selectable)	internal	external	external + AirShieldInsert	internal	external
Hysteresis	±0.25 °C	±0.025 °C	±0.025 °C	±0.25 °C	±0.025 °C
<b>Dry block</b>					
Accuracy	±0,3 °C	±0,2 °C	±0.099 °C**	±0.3 °C	
Stability	±0.010 °C	±0.005 °C	±<0.001...0.005 °C	±0.05 °C	
Resolution	0.001	0.001	0.001		
Load error			±0.010 °C		
Temperature homogeneity → Axially → Radial			±0.060 °C ±0.010 °C		
Measurement zone	123...163 mm				
<b>Micro calibration bath</b>					
Accuracy	±0.1 °C	±0.137 °C**		±0.2 °C	
Stability	±0.010 °C /	±0.005 °C		±0.05 °C	
Resolution	±0.001 °C	0.001			
Load error		±0.050 °C			
Temperature homogeneity → Axially → Radial		±0.075 °C ±0.050 °C			
Measurement zone	110...150 mm				

\* At an ambient temperature of 20 °C / 68 °F

Transition times*	TP 3M165E.2	TP 3M255E
<b>Cooling time</b> → RT...-30 °C** → Tmax...RT	40 min (Dry block) 65 min (Micro calibration bath) 24 min (Dry block) 25 min (Micro calibration bath)	105 min (Dry block) 78 min (Micro calibration bath)
<b>Heating time</b> → RT...Tmax → -35 °C...165 °C	32 min (Dry block) 50 min (Micro calibration bath) 37 min (Dry block) 56 min (Micro calibration bath)	23 min (Dry block) 105 min (Micro calibration bath)
<b>Stabilisation time</b>		
<b>With ext. reference</b> → to ±0.05 °C → to ±0.005 °C	From 5 min From 10 min	

General data		
<b>Type</b>	TP 3M165E.2	TP 3M255E
<b>Interface</b>	Ethernet, 3 x USB	
<b>Calibrator dimensions</b> → Width → Height → Depth	210 mm 380 + 50 mm 300 mm	
<b>Block dimensions</b> → Diameter → Depth	Ø 60 mm 170 mm	
<b>Weight</b>	Approx. 13 kg	Approx. 8,5 kg
<b>Power supply</b>	100...240 VAC, 50 / 60 Hz	
<b>Power consumption</b>	Approx. 375 W	Approx. 1000 W
<b>Display unit</b>		
<b>Display</b>	Brilliant Color-Touchscreen (7"), multi panel safety glass, viewing angle 120...140° Brightness 400 cd / m <sup>2</sup> , Unit °C / °F / K	
<b>Display range</b>	-50...165 °C	0...255 °C
<b>Resolution</b>	0.1 / 0.01 / 0.001 °C / °F / K	

\* Further information on transition times on request, all data refer to tests with new devices

\*\* Cooling time to Tmin [-35 °C] differs

## TP 3M // Integrated measuring instrument

<b>Technical data</b>	
<b>Optional for temperature calibrator</b>	TP 3M165E.2*
<b>Device under test input - Resistance thermometers</b>	
<b>Number of channels</b>	2
<b>Connection</b>	4x 4 mm safety socket per channel
<b>Type of connection</b>	2-, 3-, 4-wire technology
<b>Resistance range</b>	0...400 $\Omega$
<b>Accuracy Pt100</b>	$\pm 0.05$ °C
<b>Accuracy Pt1000</b>	$\pm 0.09$ °C
<b>Device under test input - Thermocouple</b>	
<b>Number of channels</b>	2
<b>Connection</b>	2x thermocouple socket (Mini)
<b>Measuring range</b>	0...100 mV
<b>Accuracy cold junction</b>	$\pm 0.3$ °C
<b>Accuracy</b>	
→ Type K	$\pm 0.08$ °C
→ Type J	$\pm 0.07$ °C
→ Type N	$\pm 0.13$ °C
→ Type E	$\pm 0.06$ °C
→ Type T	$\pm 0.09$ °C
→ Type R	$\pm 0.78$ °C
→ Type S	$\pm 0.73$ °C
<b>Standard signal input (Current)</b>	
<b>Number of channels</b>	1
<b>Connection</b>	4 mm safety socket
<b>Measuring range</b>	0...24 mA
<b>Accuracy</b>	0.01 % full scale
<b>Standard signal input (Voltage)</b>	
<b>Number of channels</b>	1
<b>Connection</b>	4 mm safety socket
<b>Measuring range</b>	0...12 VDC
<b>Accuracy</b>	0.01 % full scale
<b>Switch test</b>	
<b>Number of channels</b>	2
<b>Transmitter supply</b>	
<b>Output current</b>	Max. 24 mA
<b>Output voltage</b>	24 VDC

\* See order code

## TP 3M // Multifunction // -35...255 °C

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

1. Calibrator type	EP3M	xx	x	x	xxxxxx
2. Linearisation	EPLIK	xx	x	xx	x
3. Adapter sleeve / insert	EZxxxxxxxxxxxxx				

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

Order code										
1. Calibrator type										
Temperature range	Function	Block	Power supply	Type						
-35...165 °C	Multifunction	Ø60 x 170 mm	110...240 V	TP 3M165E.2	EP3M	16	2	6015U3		
RT...255 °C	Multifunction	Ø60 x 170 mm	110...240 V	TP 3M255E.2	EP3M	25	2	6015U3		
Integrated measuring instrument										
Without					0					
With					I					
<b>Example order number calibrator</b>					<b>EP3M</b>	<b>16</b>	<b>I</b>	<b>2</b>	<b>6015U3</b>	

Order code										
2. Linearisation										
With linearisation					EPLIK					
Function										
Dry block (Air Shield Insert)*					AS					
Dry block					DB					
Micro calibration bath (direct)					LI					
Micro calibration bath (with tub insert)					TI					
Infrared					IR					
Surface*					SU					
Reference sensor										
Internal								I		
External								E		
Medium										
None (AS, DB, IR, SU)									00	
Water (2...95 °C)									01	
Silicone oil 10 cSt (-35...155 °C)									10	
Silicone oil 20 cSt (7...220 °C)									20	
Silicone oil 50 cSt (50...270 °C)									50	
Test points										
Standard										0
Customised										K
<b>Example order number linearisation</b>					<b>EPLIK</b>	<b>AS</b>	<b>I</b>	<b>00</b>	<b>0</b>	

Order code				
<b>3. Adapter sleeve / Calibration insert</b>				
Bore holes	Function	Block	Material	Order number
1x Ø 3.5, 1x Ø 6.5, 1x Ø 8.5, 1x Ø 10.5 mm	Dry block	Ø 60 x 170 mm	Aluminium	EZ16360C04AL05
2x Ø 3.5, 2x Ø 4.5, 2x Ø 6.5, 2x Ø 8.5, 2x 10.5 mm		Ø 60 x 170 mm	Aluminium	EZ16360D10AL85
3x Ø 3.5, 3x Ø 6.5, 3x Ø 8.5, 3x 10.5 mm		Ø 60 x 170 mm	Aluminium	EZ16360D12AL86
2x Ø 3.5, 1x Ø 4.5, 1x Ø 5.0, 1x 5.5, 1x Ø 6.5, 1x Ø 8.5, 1x Ø 9.0, 1x Ø 9.5, 1x Ø 10.5 mm		Ø 60 x 170 mm	Aluminium	EZ16360D10AL87
Without bore holes		Ø 60 x 170 mm	Aluminium	EZ16360000AL00
Tub insert	Bath	Ø 60 x 170 mm		EZTPMBEK000000
Black body sleeve	Infrared	Ø 60 x 170 mm		EZ15060B03AL41IR
Adapter sleeve for surface temperature sensors	Surface	Ø 60 x 170 mm		EZ20460B03AL05OF
Air Shield Insert (ASI) without bore holes	Dry block	Ø 60 x 170 mm	Aluminium	EZ16360000AL00F
Air Shield Insert (ASI) incl. one hole by choice	Dry block (ASI)	Ø 60 x 170 mm	Aluminium	Please indicate holes in your order
Insert incl. one hole by choice	Dry block	Ø 60 x 170 mm	Aluminium	
Every additional hole	Dry block	Ø 60 x 170 mm	Aluminium	
<b>Example order number adapter sleeve / insert</b>				<b>EZ16360C04AL05</b>

Order code	
<b>4. Calibration certificate - Select your certificates as required*</b>	
SIKA-Works calibration certificate for 1. function	EKTPWP1FKT
SIKA-Works calibration certificate for 2. function	EKTPWP2FKT
SIKA-Works calibration certificate for 3. function	EKTPWP3FKT
SIKA-Works calibration certificate for 4. function	EKTPWP4FKT
DAkkS calibration certificate for 1. function	EKTPDAKKS1FKT
DAkkS calibration certificate for 2. function	EKTPDAKKS2FKT
DAkkS calibration certificate for 3. function	EKTPDAKKS3FKT
DAkkS calibration certificate for 4. function	EKTPDAKKS4FKT
Additional test point DAkkS calibration certificate	EKTPDAKKSZUSP
SIKA Works calibration certificate int. measuring instrument (Pt100, Type K)	EKTPWPMI1
SIKA Works calibration certificate int. measuring instrument (Pt100, Pt1000 Type K, Type J)	EKTPWPMI2
SIKA Works calibration certificate int. measuring instrument (Pt100, Type K, mA, V)	EKTPWPMI3
SIKA Works calibration certificate int. measuring instrument (Pt100, Pt1000 Type K, Type J, mA, V)	EKTPWPMI4
SIKA Works calibration certificate complete (Pt 500, Pt1000, Type J/N/E/T/R/S, mA, V)	EKTPWPMIZUS
SIKA Works calibration certificate complete (Pt100, Pt 500, Pt1000, Type K/J/N/E/T/R/S, mA, V)	EKTPWPMIKOMPL
DAkkS calibration certificate int. measuring instrument (Pt100, Type K)	EKTPDAKKSMI1
DAkkS calibration certificate int. measuring instrument (Pt100, Pt1000 Type K, Type J)	EKTPDAKKSMI2
DAkkS calibration certificate int. measuring instrument (Pt100, Type K, mA, V)	EKTPDAKKSMI3
DAkkS calibration certificate int. measuring instrument (Pt100, Pt1000 Type K, Type J, mA, V)	EKTPDAKKSMI4
DAkkS calibration certificate each additional measuring input of your choice (Pt 500, Pt1000, Type J/N/E/T/R/S, mA, V)	EKTPDAKKSIMIZUS
DAkkS calibration certificate complete (Pt100, Pt 500, Pt1000, Type K/J/N/E/T/R/S, mA, V)	EKTPDAKKS KOMPL



Order code		
5. Accessories		Order number
<b>Transport case</b>	<b>For type</b>	
Without trolley attachment frame	TP 3M165E.2	EZTPKOFFER005
	TP 3M255E.2	EZTPKOFFER003
With trolley attachment frame	TP 3M165E.2	EZTPKOFFER005TG
	TP 3M255E.2	EZTPKOFFER003TG
More accessories		
External reference sensor TF 255-3-300 (-55...255 °C)	TP Premium complete	W033P413000GX002
Tripod	TP 3M165E.2, TP 3M255E.2	EZTPMSG0000000
Calibration liquid (Silicone oil), 50cSt	TP 3M165E.2, TP 3M255E.2	EZSÖ0500000000
Calibration liquid (Silicone oil), 20cSt	TP 3M165E.2, TP 3M255E.2	EZSÖ0200000000
Calibration liquid (Silicone oil), 10cSt	TP 3M165E.2, TP 3M255E.2	EZSÖ0100000000
Calibration liquid (Silicone oil), 5cSt	TP 3M165E.2, TP 3M255E.2	EZSÖ0050000000
Network switch	TP Premium complete	XE2103
Barcode scanner	TP Premium complete	XE2102
Wifi router	TP Premium complete	XE2101

## TP 37 // Dry block // -55...200 °C



TP 37200E.2

BEST  
SELLER



TP 37165E.2i

Type	Highlights
TP 37200E.2	<ul style="list-style-type: none"> <li>Patented control technology - time saving up to 50%</li> <li>Worldwide fastest Dry block temperature calibrator</li> <li>Hybrid technology (Peltier elements and heating cartridges)</li> <li>Widest temperature range with cooling and heating function on the market</li> <li>Fastest stabilisation times on the market</li> <li>Patented touchscreen function</li> <li>Management of device under test with barcode scanner (Accessories)</li> </ul>

Technical data		
Type	TP 37200E.2	TP 37165E.2
Control sensor	Switchable internal / external	
Hysteresis	±0.25 °C / ±0.025 °C (internal / external)	
Temperature range*	-55...200 °C	-35...165 °C
Dry block		
Accuracy	±0.2 °C	±0.2 °C
Stability	±0.010 °C / ±0.005 °C (internal / external)	±0.010 °C / ±0.005 °C (internal / external)
Measurement zone	110...150 mm	110...150 mm

Transition times*	TP 37200E.2	TP 37165E.2
<b>Cooling time</b> → RT...Tmin** → Tmax...RT	35 min (-50 °C) 18 min	13 min (-30 °C) 11 min
<b>Heating time</b> → RT...Tmax → -Tmin...Tmax	9 min 12 min	14 min 16 min
<b>Stabilisation time</b>		
<b>With ext. reference sensor</b> → to ±0.05 °C → to ±0.005 °C	From 1 min From 5 min	From 1 min From 5 min

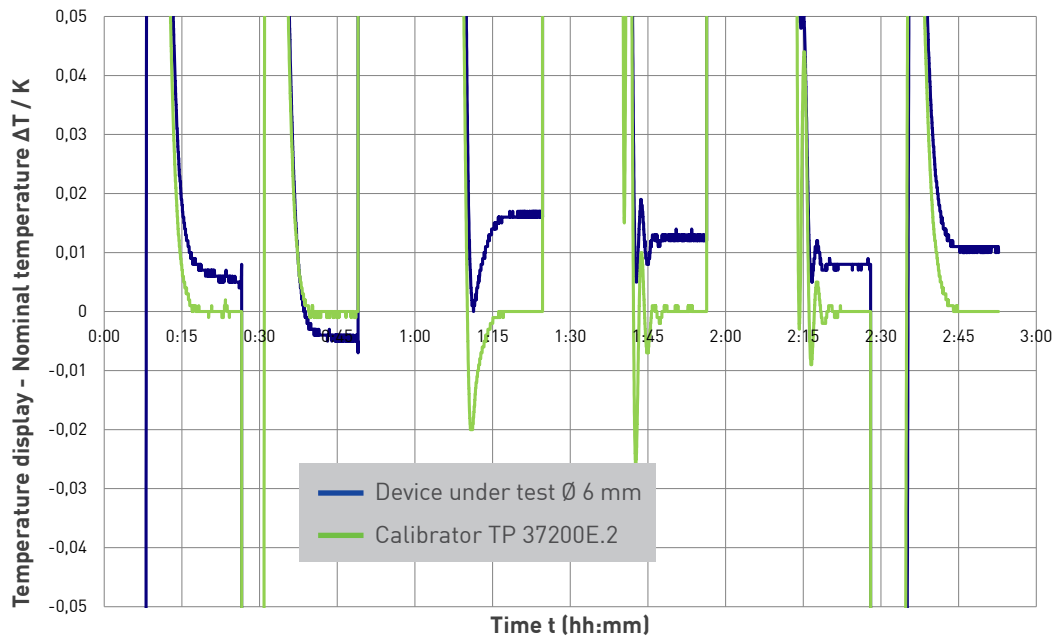
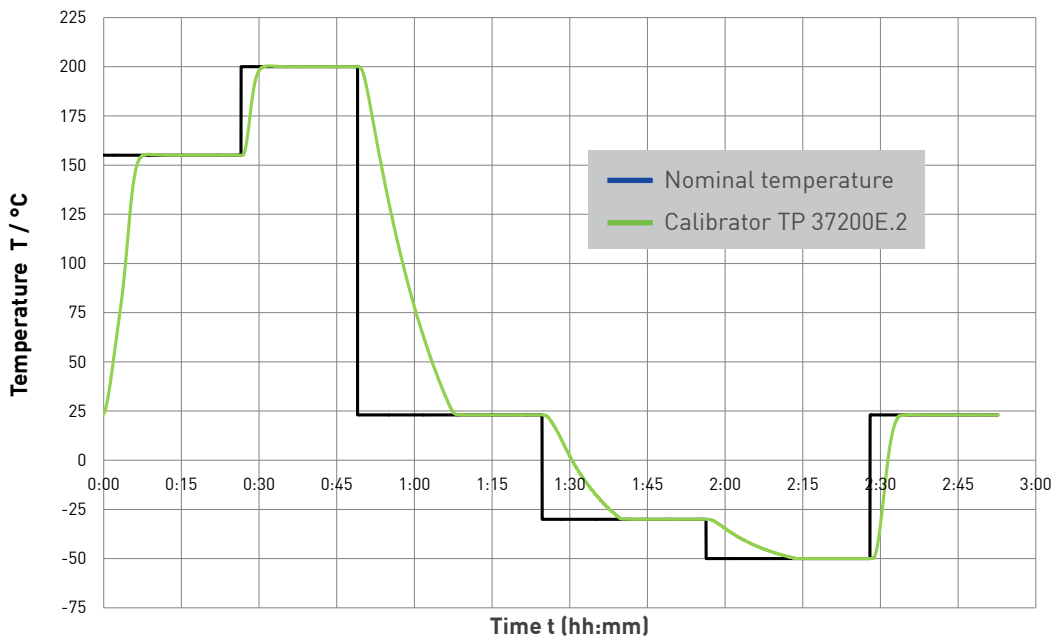
General data		
<b>Type</b>	TP 37200E.2	TP 37165E.2
<b>Interface</b>	Ethernet, 3 x USB	
<b>Calibrator dimensions</b> → Width → Height → Depth	210 mm 380 + 50 mm 300 mm	
<b>Block dimensions</b> → Diameter → Depth	Ø 28 mm 150 mm	
<b>Weight</b>	Approx. 12.5 kg	Approx. 10 kg
<b>Power supply</b>	100...240 VAC, 50 / 60 Hz	
<b>Power consumption</b>	Approx. 555 W	Approx. 375 W
<b>Display unit</b>		
<b>Display</b>	Brilliant Color-Touchscreen (7"), multi panel safety glass, Viewing angle 120...140° Brightness 400 cd / m <sup>2</sup> , Unit °C / °F / K	
<b>Display range</b>	-60...200 °C	-50...165 °C
<b>Resolution</b>	0.1 / 0.01 / 0.001 °C / °F / K	

\* Further information on transition times on request, all data refer to tests with new devices

\*\* Cooling time to Tmin (-55 °C / -35 °C) differs

# TP 37 // Dry block // -55...200 °C

## Temperature steps TP 37200E.2 with external reference



## TP 37 // Integrated measuring instrument

<b>Technical data</b>	
<b>Optional for temperature calibrators</b>	TP 37200E.2 / TP 37165E.2*
<b>Device under test input - Resistance thermometers</b>	
<b>Number of channels</b>	2
<b>Connection</b>	4x 4 mm safety socket per channel
<b>Type of connection</b>	2-, 3-, 4-wire technology
<b>Resistance range</b>	0...400 Ω
<b>Accuracy Pt100</b>	±0.05 °C
<b>Accuracy Pt1000</b>	±0.09 °C
<b>Device under test input - Thermocouple</b>	
<b>Number of channels</b>	2
<b>Connection</b>	2x thermocouple socket (Mini)
<b>Measuring range</b>	0...100 mV
<b>Accuracy cold junction</b>	±0.3 °C
<b>Accuracy</b>	
→ Type K	±0.08 °C
→ Type J	±0.07 °C
→ Type N	±0.13 °C
→ Type E	±0.06 °C
→ Type T	±0.09 °C
→ Type R	±0.78 °C
→ Type S	±0.73 °C
<b>Standard signal input (Current)</b>	
<b>Number of channels</b>	1
<b>Connection</b>	4 mm safety socket
<b>Measuring range</b>	0...24 mA
<b>Accuracy</b>	0.01 % full scale
<b>Standard signal input (Voltage)</b>	
<b>Number of channels</b>	1
<b>Connection</b>	4 mm safety socket
<b>Measuring range</b>	0...12 VDC
<b>Accuracy</b>	0.01 % full scale
<b>Switch test</b>	
<b>Number of channels</b>	2
<b>Transmitter supply</b>	
<b>Output current</b>	Max. 24 mA
<b>Output voltage</b>	24 VDC

\* See order code

## TP 37 // Dry block // -55...200 °C

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

1. Calibrator type	EP37	xx	x	x	xxxxxx
2. Linearisation	EPLIK	xx	x	x	
3. Adapter sleeve	EZxxxxxxxxxxxx				

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

Order code									
1. Calibrator type									
Temperature range	Function	Block	Power supply	Type					
-55...200°C	Dry block	Ø 28 x 150 mm	110...240 V	TP 37200E.2	EP37	20	2	2815U3	
-35...165°C	Dry block	Ø 28 x 150 mm	110...240 V	TP 37165E.2	EP37	16	2	2815U3	
Integrated measuring instrument									
Without					0				
With					I				
<b>Example order number calibrator</b>					<b>EP37</b>	<b>20</b>	<b>I</b>	<b>2</b>	<b>2815U3</b>

Order code									
2. Linearisation									
With linearisation					EPLIK	DB			
Reference sensor									
Internal					I00				
External					E00				
Test points									
Standard									0
Customised									K
<b>Example order number linearisation</b>					<b>EPLIK</b>	<b>DB</b>	<b>I</b>		<b>0</b>

Order code								
3. Adapter sleeve								
Bore holes	Function	Block	Material	Order number				
1x Ø 3.5, 1x Ø 6.5, 1x Ø 13.5 mm	Dry block	Ø 28 x 150 mm	Brass	EZ15028B03MS17				
1x Ø 6.5 mm				EZ15028065MS00				
2x Ø 3.5 mm				EZ15028B02MS09				
1x Ø 3.5, 1x Ø 4.5 mm				EZ15028F02MS80				
1x Ø 3.5, 1x Ø 6.5 mm				EZ15028H02MS01				
1x Ø 3.5, 1x Ø 8.5 mm				EZ15028B02MS67				
1x Ø 3.5, 1x Ø 6.5, 1x Ø 8.5, 1x Ø 10.5 mm				EZ15028C04MS15				
Without bore holes				EZ15028000MS00				
Insert incl. one hole by choice	Dry block	Ø 28 x 150 mm	Brass	Please indicate holes in your order				
Every additional hole								
<b>Example order number adapter sleeve</b>					<b>EZ16360C04AL05</b>			

Order code	
<b>4. Calibration certificate - Select your certificates as required*</b>	<b>Order number</b>
SIKA-Works calibration certificate for 1. function	EKTPWP1FKT
SIKA-Works calibration certificate for 2. function	EKTPWP2FKT
DAkkS calibration certificate for 1. function	EKTPDAKKS1FKT
DAkkS calibration certificate for 2. function	EKTPDAKKS2FKT
Additional test point DAkkS calibration certificate	EKTPDAKKSZUSP
SIKA Works calibration certificate int. measuring instrument (Pt100, Type K)	EKTPWPMI1
SIKA Works calibration certificate int. measuring instrument (Pt100, Pt1000 Type K, Type J)	EKTPWPMI2
SIKA Works calibration certificate int. measuring instrument (Pt100, Type K, mA, V)	EKTPWPMI3
SIKA Works calibration certificate int. measuring instrument (Pt100, Pt1000 Type K, Type J, mA, V)	EKTPWPMI4
SIKA Works calibration certificate each additional measuring input of your choice (Pt 500, Pt1000, Type J/N/E/T/R/S, mA, V)	EKTPWPMIZUS
SIKA Works calibration certificate complete (Pt100, Pt 500, Pt1000, Type K/J/N/E/T/R/S, mA, V)	EKTPWPMIKOMPL
DAkkS calibration certificate int. measuring instrument (Pt100, Type K)	EKTPDAKKSMI1
DAkkS calibration certificate int. measuring instrument (Pt100, Pt1000 Type K, Type J)	EKTPDAKKSMI2
DAkkS calibration certificate int. measuring instrument (Pt100, Type K, mA, V)	EKTPDAKKSMI3
DAkkS calibration certificate int. measuring instrument (Pt100, Pt1000 Type K, Type J, mA, V)	EKTPDAKKSMI4
DAkkS calibration certificate each additional measuring input of your choice (Pt 500, Pt1000, Type J/N/E/T/R/S, mA, V)	EKTPDAKKSIZUS
DAkkS calibration certificate complete (Pt100, Pt 500, Pt1000, Type K/J/N/E/T/R/S, mA, V)	EKTPDAKKSOMPL

Order code	
<b>5. Accessories</b>	<b>Order number</b>
<b>Transport case</b>	
Without trolley attachment frame	EZTPKOFFER004
With trolley attachment frame	EZTPKOFFER004TG
<b>More accessories</b>	
Ext. reference sensor TF 255-3-300 (-55...255 °C)	W033P413000GX002
Network Switch	XE2103
Barcode scanner	XE2102
Wifi Router	XE2101

## TP 38 // Special versions // -35...650 °C



Technical data		
Type	TP 38165	TP 38650
Control sensor	Switchable internal / external	
Temperature range*	-35...165 °C	RT...650 °C
Dry block		
Accuracy	±0.1 °C	±0.2 °C
Stability	0.01...0.05 °C	0.03...0.1 °C
Measurement zone	110...150 mm	
Display unit		
Display	Monochrome, graphic display Units °C / °F / K / Ω / mV / mA	
Display range	-50...165 °C	0...650 °C
Resolution	0.01 °C	



General data		
<b>Type</b>	TP 38165	TP 38650
<b>Interface</b>	RS232, USB [optional]	
<b>Calibrator dimensions</b> → Width → Height → Depth	153 mm 347 mm 348 mm	
<b>Block dimensions</b> → Diameter → Depth	∅ 28 mm 150 mm	∅ 28 mm 150 mm
<b>Weight</b>	Approx. 12 kg	Approx. 10 kg
<b>Power supply</b> → Standard → Optional	100...240 VAC, 50 / 60 Hz	230...240 VAC, 50 / 60 Hz, 100...115 VAC, 50 / 60 Hz
<b>Power consumption</b>	Approx. 400 W	Approx. 1000 W

Order code		
<b>Type</b>	TP 38165	TP 38650
	EP381500281503	EP386000281500

Equipment for requested type with separate order code

Equipment	Example → EPLIK	DB	I	00	0
<b>Linearisation</b>					
With Linearisation	EPLIK				
<b>Function</b>					
Dry block		DB			
<b>Reference sensor</b>					
Internal			I		
External			E		
<b>Adjustment to medium</b>					
No medium				00	
<b>Test points</b>					
Standard					0
Customised					K

Options	Order code
<b>Type</b>	TP 38650
<b>Power supply</b> → 100...115 V	EP386000281502

## TP 17 // Dry block // -55...650 °C



Technical data					
Type	TP 17200S	TP 17165S	TP 17166S	TP 17450S	TP 17650S
Control sensor	internal				
Temperature range*	-55...200 °C	-35...165 °C	-35...165 °C	RT...450 °C	RT...650 °C
Dry block					
Accuracy	±0.2 °C	±0.2 °C	±0.2 °C	±0.3 °C	±0.4 °C
Stability	±0.05 °C	±0.05 °C	±0.05 °C	±0.05 °C	±0.05 °C
Measurement zone	110...150 mm				
Display unit					
Display	2-line, 4-digit display red / green, unit °C / °F				
Display range	-60...200 °C	-50...165 °C	-50...165 °C	0...450 °C	0...650 °C
Resolution	0.01 °C between -9.99...99.99 °C, else 0.1 °C			0.01 °C between RT...99.99 °C, else 0.1 °C	

General data					
<b>Type</b>	TP 17200S	TP 17165S	TP 17166S	TP 17450S	TP 17650S
<b>Interface</b>	RS485, RS232 or USB (optional)				
<b>Calibrator dimensions</b> → Width → Height → Depth	210 mm 380 + 50 mm 300 mm		150 mm 330 + 70 mm 270 mm		
<b>Block dimensions</b> → Diameter → Depth	Ø 28 mm 150 mm	Ø 28 mm 150 mm	Ø 60 mm 150 mm	Ø 60 mm 150 mm	Ø 28 mm 150 mm
<b>Weight</b>	Approx. 12.5 kg	Approx. 10 kg	Approx. 7.5 kg		
<b>Power supply</b> → Standard  → Optional	100...240 VAC, 50 / 60 Hz		230...240 VAC, 50 / 60 Hz		230...240 VAC, 50 / 60 Hz, 100...115 VAC, 50 / 60 Hz 115...230 VAC, 50 / 60 Hz
<b>Power consumption</b>	Approx. 555 W	Approx. 375 W		Approx. 2000 W	Approx. 1000 W

## TP 17 // Dry block // -55...650 °C

Order code					
1. Calibrator type					Order number
Temperature range	Function	Block	Power supply	Type	
-55...200°C	Dry block	Ø 28 x 150 mm	100...240 V	TP 17200S	EP17200S281503
-35...165°C		Ø 28 x 150 mm	100...240 V	TP 17165S	EP17160S281503
-35...165°C		Ø 60 x 150 mm	100...240 V	TP 17166S	EP17160S601503
RT...450°C		Ø 60 x 150 mm	230 V	TP 17450S	EP17450S601500
RT...650°C		Ø 28 x 150 mm	230 V	TP 17650S	EP17650S281500
RT...650°C		Ø 28 x 150 mm	115 V	TP 17650S	EP17650S281502
RT...650°C		Ø 28 x 150 mm	100...240 V	TP 17650S	EP17650S281503

Order code					
2. Adapter sleeve					Order number
Bore holes	Function	Block	Material		
1x Ø 3.5, 1x Ø 6.5, 1x Ø 13.5 mm	Dry block	Ø 28 x 150 mm	Brass		EZ15028B03MS17
1x Ø 6.5 mm		Ø 28 x 150 mm	Brass		EZ15028065MS00
2x Ø 3.5 mm		Ø 28 x 150 mm	Brass		EZ15028B02MS09
1x Ø 3.5, 1x Ø 4.5 mm		Ø 28 x 150 mm	Brass		EZ15028F02MS80
1x Ø 3.5, 1x Ø 6.5 mm		Ø 28 x 150 mm	Brass		EZ15028H02MS01
1x Ø 3.5, 1x Ø 8.5 mm		Ø 28 x 150 mm	Brass		EZ15028B02MS67
1x Ø 3.5, 1x Ø 6.5, 1x Ø 8.5, 1x Ø 10.5 mm		Ø 28 x 150 mm	Brass		EZ15028C04MS15
1x Ø 3.5, 1x Ø 6.5, 1x Ø 8.5, 1x Ø 10.5 mm		Ø 60 x 150 mm	Brass		EZ15060B04MS01
1x Ø 3.5, 1x Ø 6.5, 1x Ø 8.5, 1x Ø 10.5 mm		Ø 60 x 150 mm	Aluminium		EZ15060D04AL78
2x Ø 3.5, 2x Ø 4.5, 2x Ø 6.5, 2x Ø 8.5, 2x 10.5 mm		Ø 60 x 150 mm	Brass		EZ15060D10MS80
2x Ø 3.5, 2x Ø 4.5, 2x Ø 6.5, 2x Ø 8.5, 2x 10.5 mm		Ø 60 x 150 mm	Aluminium		EZ15060D10AL79
3x Ø 3.5, 3x Ø 6.5, 3x Ø 8.5, 3x 10.5 mm		Ø 60 x 150 mm	Brass		EZ15060D12MS82
3x Ø 3.5, 3x Ø 6.5, 3x Ø 8.5, 3x 10.5 mm		Ø 60 x 150 mm	Aluminium		EZ15060D12AL81
2x Ø 3.5, 1x Ø 4.5, 1x Ø 5.0, 1x 5.5, 1x Ø 6.5, 1x Ø 8.5, 1x Ø 9.0, 1x Ø 9.5, 1x Ø 10.5 mm		Ø 60 x 150 mm	Brass		EZ15060D10MS84
2x Ø 3.5, 1x Ø 4.5, 1x Ø 5.0, 1x 5.5, 1x Ø 6.5, 1x Ø 8.5, 1x Ø 9.0, 1x Ø 9.5, 1x Ø 10.5 mm		Ø 60 x 150 mm	Aluminium		EZ15060D10AL83
Without bore holes		Ø 28 x 150 mm	Brass		EZ15028000MS00
Without bore holes		Ø 60 x 150 mm	Brass		EZ15060B00MS06
Without bore holes		Ø 60 x 150 mm	Aluminium		EZ15060B00AL00
Insert incl. one hole by choice	Dry block	Ø 28 x 150 mm	Brass		Please indicate holes in your order
Insert incl. one hole by choice		Ø 60 x 150 mm	Brass		
Insert incl. one hole by choice		Ø 60 x 150 mm	Aluminium		
Every additional hole		Ø 28 x 150 mm	Brass		
Every additional hole		Ø 60 x 150 mm	Brass		
Every additional hole		Ø 60 x 150 mm	Aluminium		

Order code		Order number
<b>3. Calibration certificate - Select your certificates as required*</b>		
SIKA-Works calibration certificate		EKTPWP1FKT
DAkKS calibration certificate		EKTPDAKKS1FKT
Additional test point DAkKS calibration certificate		EKTPDAKKSZUSP

Order code		
<b>4. Accessories</b>		<b>Order number</b>
<b>Transport case</b>	<b>For type</b>	
Without trolley attachment frame	TP 17650S	EZTPKOFFER002
	TP 17450S	EZTPKOFFER003
	TP 17165S, TP 17200S	EZTPKOFFER004
	TP 17166S	EZTPKOFFER005
With trolley attachment frame	TP 17650S	EZTPKOFFER002TG
	TP 17450S	EZTPKOFFER003TG
	TP 17165S, TP 17200S	EZTPKOFFER004TG
	TP 17166S	EZTPKOFFER005TG
<b>More accessories</b>		
Transport bag	TP 17650S, TP 17450S	XE2193
PC software (without TT-Scan)	All TP Solid	EZ999999999971
PC software (with TT-Scan)	All TP Solid	EZ380000000001
Converter RS485 to USB	All TP Solid	EZ170000000002
Converter RS232 to USB	All TP Solid	EZ380000000002

## TP 17 and TP 28 // Special versions // -10...1300 °C



Technical data		
Type	TP 17ZERO	TP 281300E
Control sensor	internal	
Temperature range*	-10...100 °C	400...1300 °C
<b>Dry block</b>		
Accuracy	±0.05 °C at 0 °C	±2 °C
Stability	±0.05 °C at 0 °C	±0.5 °C
Measurement zone	110...150 mm	bei 200 mm
<b>Display unit</b>		
Display	1-line, 4-digit display red, unit °C [°F optional]	2-line, 4-digit display red / green, unit °C / °F
Display range	-10...100 °C	0...1300 °C
Resolution	0.1 °C	1 °C

General data		
<b>Type</b>	TP 17ZERO	TP 281300E
<b>Interface</b>		RS485, RS232 or USB (optional)
<b>Calibrator dimensions</b> → Width → Height → Depth	150 mm 330 + 70 mm 270 mm	510 mm 290 mm 415 + 100 mm
<b>Block dimensions</b> → Diameter  → Depth	7 drillings with Ø 6,5 mm 150 mm	Ø 28 mm 200 mm
<b>Weight</b>	Approx. 7 kg	Approx. 17,5 kg
<b>Power supply</b>	100...240 VAC, 50 / 60 Hz	230...240 VAC, 50 / 60 Hz,
<b>Power consumption</b>	Approx. 225 W	Approx. 1000 W

Order code					
1. Calibrator type					Order number
<b>Temperature range</b>	<b>Function</b>	<b>Block</b>	<b>Power supply</b>	<b>Type</b>	
-10...100°C	Dry block	7x Ø6,5 mm	230 V	TP 17Zero	EP171000B71503
400...1300°C		Ø28 x 200mm**	230 V	TP 281300E	EP28138E000003

Order code					
2. Adapter sleeve (only TP 281300E)					Order number
<b>Bore holes</b>	<b>Function</b>	<b>Block</b>	<b>Material</b>		
Insert incl. one hole by choice Every additional hole	Dry block	Ø 28 x 200 mm	Kanthal		Please indicate holes in your order

Order code	
3. Calibration certificate - Select your certificates as required***	
SIKA-Works calibration certificate	EKTPWP1FKT
DAkkS calibration certificate	EKTPDAKKS1FKT
Additional test point DAkkS calibration certificate	EKTPDAKKSZUSP

Order code		
4. Accessories		Order number
<b>Description</b>	<b>For type</b>	
PC software (without TT-Scan)	Alle TP Solid	EZ999999999971
PC software (with TT-Scan)	Alle TP Solid	EZ380000000001
Converter RS485 to USB	Alle TP Solid	EZ170000000002
Converter RS232 to USB	Alle TP Solid	EZ380000000002

\*\* Suitable adapter sleeve not included in scope of delivery, please order separately under point 2.

\*\*\* Each calibrator comes with a standard test certificate.

## TP M // Micro calibration bath // -35...255 °C



TP M165S



TP M255S

Technical data		
Type	TP M165S	TP M255S
Control sensor	internal	
Temperature range*	-35...165 °C	RT...255 °C
Micro calibration bath		
Accuracy	±0.1 °C	±0.2 °C
Stability	±0.05 °C	±0.05 °C
Measurement zone	110...150 mm	
Display unit		
Display	2-line, 4-digit display red / green, unit °C / °F	
Display range	-50...165 °C	0...255 °C
Resolution	0.01 °C between -9.99...99.99 °C, else 0.1 °C	



<b>General data</b>		
<b>Type</b>	TP M165S	TP M255S
<b>Interface</b>	RS485, RS232 or USB (optional)	
<b>Calibrator dimensions</b> → Width → Height → Depth	210 mm 380 + 50 mm 300 mm	150 mm 330 + 70 mm 270 mm
<b>Block dimensions</b> → Diameter → Depth	Ø 60 mm 170 mm	
<b>Weight</b>	Approx. 12.5 kg	Approx. 7.5 kg
<b>Power supply</b> → Standard → Optional	100...240 VAC, 50 / 60 Hz	230...240 VAC, 50 / 60 Hz, 100...115 VAC, 50 / 60 Hz 100...240 VAC, 50 / 60 Hz
<b>Power consumption</b>	Approx. 375 W	Approx. 1000 W

## TP M // Micro calibration bath // -35...255 °C

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

1. Calibrator type	EPMB	xx	x	x	xxxxxx
2. Linearisation	EPLIK	xx	x	xx	x
3. Insert	EZxxxxxxxxxxxxx				

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

Order code					
1. Calibrator type					Order number
Temperature range	Function	Block	Power supply	Type	
-35...165°C	Bath	Ø 60 x 170 mm	100...240 V	TP M165S	EPMB160S601503
RT...255°C			230 V	TP M255S	EPMB250S601500
RT...255°C			115 V	TP M255S	EPMB250S601502
RT...255°C			110...240 V	TP M255S	EPMB250S601503
<b>Example order number calibrator</b>					<b>EPMB250S601503</b>

Order code			
2. Linearisation			
With linearisation	EPLIK		
Function			
Micro calibration bath (direct)	LII		
Micro calibration bath (with tub insert)	TII		
Medium			
Wasser (2...95 °C)			01
Silicone oil 10 cSt (-35...155 °C)			10
Silicone oil 20 cSt (7...220 °C)			20
Silicone oil 50 cSt (50...270 °C)			50
Test points			
Standard			0
Customised			K
<b>Example order number linearisation</b>			<b>EPLIK LII 00 0</b>

Order code				
3. Übergangshülse / Kalibriereinsatz				Order number
Bore holes	Function	Block	Material	
Bechereinsatz	Bath	Ø 60 x 170 mm		EZTPMBEK000000
<b>Example order number insert</b>				<b>EZTPMBEK000000</b>

Order code		Order number
<b>4. Calibration certificate - Select your certificates as required*</b>		
SIKA-Works calibration certificate for 1. function		EKTPWP1FKT
SIKA-Works calibration certificate for 2. function		EKTPWP2FKT
DAkKS calibration certificate for 1. function		EKTPDAKKS1FKT
DAkKS calibration certificate for 2. function		EKTPDAKKS2FKT
Additional test point DAkKS calibration certificate		EKTPDAKKSZUSP

Order code		
<b>5. Accessories</b>		<b>Order number</b>
<b>Transport case</b>	<b>For type</b>	
Without trolley attachment frame	TP M165S	EZTPKOFFER005
	TP M255S	EZTPKOFFER003
With trolley attachment frame	TP M165S	EZTPKOFFER005TG
	TP M255S	EZTPKOFFER003TG
<b>More accessories</b>		
Tripod	All TP M	EZTPMSG0000000
Calibration liquid (Silicone oil), 50cSt	All TP M	EZSÖ0500000000
Calibration liquid (Silicone oil), 20cSt	All TP M	EZSÖ0200000000
Calibration liquid (Silicone oil), 10cSt	All TP M	EZSÖ0100000000
Calibration liquid (Silicone oil), 5cSt	All TP M	EZSÖ0050000000
PC software (without TT-Scan)	All TP M	EZ999999999971
PC software (with TT-Scan)	All TP M	EZ380000000001
Converter RS485 to USB	All TP M	EZ170000000002
Converter RS232 to USB	All TP M	EZ380000000002

## TP 17 // Dry block // -55...650 °C



TP 17200



TP 17650

### Technical data

Type	TP 17200	TP 17165	TP 17166	TP 17450	TP 17650
Control sensor	internal				
Temperature range*	-55...200 °C	-35...165 °C	-35...165 °C	RT...450 °C	RT...650 °C
<b>Dry block</b>					
Accuracy	±0.4 °C	±0.4 °C	±0.4 °C	±0.6 °C	±0.8 °C
Stability	±0.1 °C	±0.1 °C	±0.1 °C	±0.1 °C	±0.1 °C
Measurement zone	110...150 mm				
<b>Display unit</b>					
Display	2-line, 4-digit display red / green, unit °C / °F				
Display range	-60...200 °C	-50...165 °C	-50...165 °C	0...450 °C	0...650 °C
Resolution	0.1 °C				

General data					
Type	TP 17200	TP 17165	TP 17166	TP 17450	TP 17650
<b>Calibrator dimensions</b> → Width → Height → Depth	210 mm 380 + 50 mm 300 mm			150 mm 330 + 70 mm 270 mm	
<b>Block dimensions</b> → Diameter → Depth	Ø 28 mm 150 mm		Ø 60 mm 150 mm	Ø 60 mm 150 mm	Ø 28 mm 150 mm
<b>Weight</b>	Approx. 12.5 kg	Approx. 10 kg		Approx. 7.5 kg	
<b>Power supply</b> → Standard  → Optional	100...240 VAC, 50 / 60 Hz		230...240 VAC, 50 / 60 Hz		230...240 VAC, 50 / 60 Hz 100...115 VAC, 50 / 60 Hz 100...240 VAC, 50 / 60 Hz
<b>Power consumption</b>	Approx. 555 W	Approx. 375 W		Approx. 2000 W	Approx. 1000 W

## TP 17 // Dry block // -55...650 °C

Order code					Order number
1. Calibrator type					
Temperature range	Function	Block	Power supply	Type	
-55...200°C	Dry block	Ø 28 x 150 mm	100...240 V	TP 17200	EP172000281503
-35...165°C		Ø 28 x 150 mm	100...240 V	TP 17165	EP171600281503
-35...165°C		Ø 60 x 150 mm	100...240 V	TP 17166	EP171600601503
RT...450°C		Ø 60 x 150 mm	230 V	TP 17450	EP174500601500
RT...650°C		Ø 28 x 150 mm	230 V	TP 17650	EP176500281500
RT...650°C		Ø 28 x 150 mm	115 V	TP 17650	EP176500281502
RT...650°C		Ø 28 x 150 mm	110...240 V	TP 17650	EP176500281503

Order code					Order number
2. Adapter sleeve					
Bore holes	Function	Block	Material		
1x Ø 3.5, 1x Ø 6.5, 1x Ø 13.5 mm	Dry block	Ø 28 x 150 mm	Brass		EZ15028B03MS17
1x Ø 6.5 mm		Ø 28 x 150 mm	Brass		EZ15028065MS00
2x Ø 3.5 mm		Ø 28 x 150 mm	Brass		EZ15028B02MS09
1x Ø 3.5, 1x Ø 4.5 mm		Ø 28 x 150 mm	Brass		EZ15028F02MS80
1x Ø 3.5, 1x Ø 6.5 mm		Ø 28 x 150 mm	Brass		EZ15028H02MS01
1x Ø 3.5, 1x Ø 8.5 mm		Ø 28 x 150 mm	Brass		EZ15028B02MS67
1x Ø 3.5, 1x Ø 6.5, 1x Ø 8.5, 1x Ø 10.5 mm		Ø 28 x 150 mm	Brass		EZ15028C04MS15
1x Ø 3.5, 1x Ø 6.5, 1x Ø 8.5, 1x Ø 10.5 mm		Ø 60 x 150 mm	Brass*		EZ15060B04MS01
1x Ø 3.5, 1x Ø 6.5, 1x Ø 8.5, 1x Ø 10.5 mm		Ø 60 x 150 mm	Aluminium		EZ15060D04AL78
2x Ø 3.5, 2x Ø 4.5, 2x Ø 6.5, 2x Ø 8.5, 2x 10.5 mm		Ø 60 x 150 mm	Brass*		EZ15060D10MS80
2x Ø 3.5, 2x Ø 4.5, 2x Ø 6.5, 2x Ø 8.5, 2x 10.5 mm		Ø 60 x 150 mm	Aluminium		EZ15060D10AL79
3x Ø 3.5, 3x Ø 6.5, 3x Ø 8.5, 3x 10.5 mm		Ø 60 x 150 mm	Brass*		EZ15060D12MS82
3x Ø 3.5, 3x Ø 6.5, 3x Ø 8.5, 3x 10.5 mm		Ø 60 x 150 mm	Aluminium		EZ15060D12AL81
2x Ø 3.5, 1x Ø 4.5, 1x Ø 5.0, 1x 5.5, 1x Ø 6.5, 1x Ø 8.5, 1x Ø 9.0, 1x Ø 9.5, 1x Ø 10.5 mm		Ø 60 x 150 mm	Brass*		EZ15060D10MS84
2x Ø 3.5, 1x Ø 4.5, 1x Ø 5.0, 1x 5.5, 1x Ø 6.5, 1x Ø 8.5, 1x Ø 9.0, 1x Ø 9.5, 1x Ø 10.5 mm		Ø 60 x 150 mm	Aluminium		EZ15060D10AL83
Without bore holes		Ø 28 x 150 mm	Brass		EZ15028000MS00
Without bore holes		Ø 60 x 150 mm	Brass		EZ15060B00MS06
Without bore holes		Ø 60 x 150 mm	Aluminium		EZ15060B00AL00
Insert incl. one hole by choice	Dry block	Ø 28 x 150 mm	Brass		Please indicate holes in your order
Insert incl. one hole by choice		Ø 60 x 150 mm	Brass		
Insert incl. one hole by choice		Ø 60 x 150 mm	Aluminium		
Every additional hole		Ø 28 x 150 mm	Brass		
Every additional hole		Ø 60 x 150 mm	Brass		
Every additional hole		Ø 60 x 150 mm	Aluminium		

\* Only TP 17450

Order code	
<b>3. Calibration certificate - Select your certificates as required*</b>	
SIKA-Works calibration certificate	EKTPWP1FKT
DAkKS calibration certificate	EKTPDAKKS1FKT
Additional test point DAkKS calibration certificate	EKTPDAKKSZUSP

Order code		
<b>4. Accessories</b>		<b>Order number</b>
<b>Transport case</b>	<b>For type</b>	
Without trolley attachment frame	TP 17650	EZTPKOFFER002
	TP 17450	EZTPKOFFER003
	TP 17165, TP 17200	EZTPKOFFER004
	TP 17166	EZTPKOFFER005
With trolley attachment frame	TP 17650	EZTPKOFFER002TG
	TP 17450	EZTPKOFFER003TG
	TP 17165, TP 17200	EZTPKOFFER004TG
	TP 17166	EZTPKOFFER005TG
<b>More accessories</b>		
Transport bag	TP 17650, TP 17450	XE2193

\* Each calibrator comes with a standard test certificate.

## TP 17 // Dry block // -35...650 °C




TP 17165M



TP 17650M

### Technical data

<b>Type</b>	TP 17165M	TP 17650M
<b>Control sensor</b>	internal	
<b>Temperature range*</b>	-35...165 °C	RT...650 °C
<b>Dry block</b>		
<b>Accuracy</b>	±1 °C	±1 °C
<b>Stability</b>	±0.1 °C	±0.1 °C
<b>Measurement zone</b>	110...150 mm	
<b>Display unit</b>		
<b>Display</b>	2-line, 4-digit display red / green, unit °C / °F	
<b>Display range</b>	-50...165 °C	0...650 °C
<b>Resolution</b>	1 °C	
<b>Approvals</b>		
		



<b>General data</b>		
<b>Type</b>	TP 17165M	TP 17650M
<b>Calibrator dimensions</b>		
→ Width	150 mm	150 mm
→ Height	330 + 70 mm	330 + 70 mm
→ Depth	270 mm	270 mm
<b>Block dimensions</b>		
→ Diameter	Ø 28 mm	Ø 28 mm
→ Depth	150 mm	150 mm
<b>Weight</b>	Approx. 10 kg	Approx. 7.5 kg
<b>Power supply</b>		
→ Standard	100...240 VAC, 50 / 60 Hz	230...240 VAC, 50 / 60 Hz
→ Optional		100...115 VAC, 50 / 60 Hz 100...240 VAC, 50 / 60 Hz
<b>Power consumption</b>	Approx. 375 W	Approx. 1000 W

## TP 17 // Dry block // -35...650 °C

Order code					Order number
1. Calibrator type					
Temperature range	Function	Block	Power supply	Type	
-35...165°C	Dry block	Ø 28 x 150 mm	100...240 V	TP 17165M	EP17160M281503
RT...650°C			230 V	TP 17650M	EP17650M281500
RT...650°C			115 V	TP 17650M	EP17650M281502
RT...650°C			110...240 V	TP 17650M	EP17650M281503

Order code					Order number
2. Adapter sleeve					
Bore holes	Function	Block	Material		
1x Ø 3.5, 1x Ø 6.5, 1x Ø 13.5 mm	Dry block	Ø 28 x 150 mm	Brass		EZ15028B03MS17
1x Ø 6.5 mm					EZ15028065MS00
2x Ø 3.5 mm					EZ15028B02MS09
1x Ø 3.5, 1x Ø 4.5 mm					EZ15028F02MS80
1x Ø 3.5, 1x Ø 6.5 mm					EZ15028H02MS01
1x Ø 3.5, 1x Ø 8.5 mm					EZ15028B02MS67
1x Ø 3.5, 1x Ø 6.5, 1x Ø 8.5, 1x Ø 10.5 mm					EZ15028C04MS15
Without bore holes					EZ15028000MS00
Insert incl. one hole by choice	Dry block	Ø 28 x 150 mm	Brass		Please indicate holes
Every additional hole					in your order

Order code		Order number
<b>3. Calibration certificate - Select your certificates as required*</b>		
SIKA-Works calibration certificate		EKTPWP1FKT
DAkKS calibration certificate		EKTPDAKKS1FKT
Additional test point DAkKS calibration certificate		EKTPDAKKSZUSP

Order code			Order number
<b>4. Accessories</b>			
<b>Transport case</b>	<b>For type</b>		
Without trolley attachment frame	TP 17650M		EZTPKOFFER002
	TP 17165M		EZTPKOFFER004
With trolley attachment frame	TP 17650M		EZTPKOFFER002TG
	TP 17165M		EZTPKOFFER004TG
<b>More accessories</b>			
Transport bag	TP 17650M		XE2193

## TP 18 // Special versions // Room temperature (RT)...850 °C



TP 18200E



TP 18850E

### Technical data

<b>Type</b>	TP 18200E	TP 18850E
<b>Control sensor</b>	internal	
<b>Temperature range*</b>	RT...200 °C	RT...850 °C
<b>Dry block</b>		
<b>Accuracy</b>	±1 °C	±1 °C
<b>Stability</b>	±0.1 °C	±0.1 °C
<b>Measurement zone</b>	60...100 mm	
<b>Display unit</b>		
<b>Display</b>	2-line, 4-digit display red / green, unit °C / °F	
<b>Display range</b>	0...200 °C	0...850 °C
<b>Resolution</b>	1 °C	

General data		
<b>Type</b>	TP 18200E	TP 18850E
<b>Calibrator dimensions</b>		
→ Width	220 mm	330 mm (handles + 70 mm)
→ Height	96 mm	270 mm
→ Depth	230 mm (handle + 50 mm)	150 mm
<b>Block dimensions</b>		
→ Diameter	Ø 18 mm	
→ Depth	100 mm	
<b>Weight</b>	Approx. 4 kg	Approx. 14 kg
<b>Power supply</b>		
→ Standard	230...240 VAC, 50 / 60 Hz,	230...240 VAC, 50 / 60 Hz
→ Optional	100...115 VAC, 50 / 60 Hz	
<b>Power consumption</b>	Approx. 200 W	Approx. 2000 W

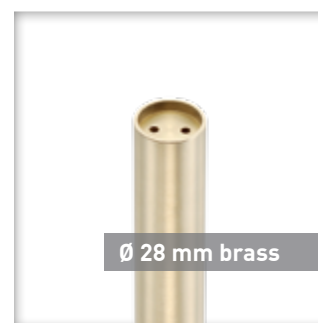
Order code					
1. Calibrator type					Order number
Temperature range	Function	Block**	Power supply	Type	
RT...200°C	Dry block	Ø 18 x 100 mm	230 V	TP 18200E	EP18200E181000
RT...200°C			115 V	TP 18200E	EP18200E181002
RT...850°C			230 V	TP 18850E	EP18850E181000


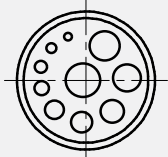



Order code					
2. Adapter sleeve					Order number
Bore holes	Function	Block	Material		
Insert incl. one hole by choice	Dry block	Ø 18 x 100 mm	Brass		Please indicate holes in your order
Every additional hole					

Order code	
3. Calibration certificate - Select your certificates as required***	
	Order number
SIKA-Works calibration certificate	EKTPWP1FKT
DAkKS calibration certificate	EKTPDAKKS1FKT
Additional test point DAkKS calibration certificate	EKTPDAKKSZUSP

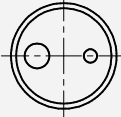
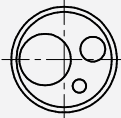
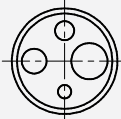
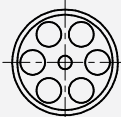
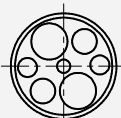
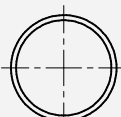
Order code		
4. Accessories		Order number
Transport case	For type	
Without trolley attachment frame	TP 18200	EZ999999990001
With trolley attachment frame	TP 18850	EZ999999990005

## Accessories // Adapter sleeves // Measuring inserts



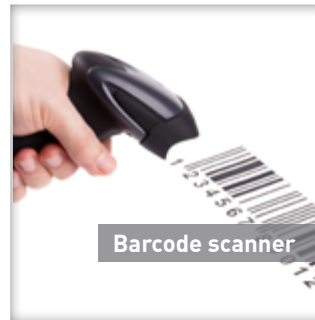
Accessories	Order code		
<b>Adapter sleeve (including one drilling)</b>	Calibrators with dry block function	According configuration	
<b>More drillings</b>	Custom	According configuration	
<b>Black body sleeve for calibration of infrared thermometers</b>	Ø 60 x 150mm and Ø 60 x 170mm	EZ15060B03AL41R	
<b>Tub insert for micro calibration bath</b>	Ø 60 x 170 mm	EZTPMBEK000000	
<b>Adapter sleeve for surface temperature sensors</b>	Calibrators with block dimensions 170 mm (depth)	EZ20460B03AL050F	

## Accessories // Adapter sleeves // Standard configuration

Series	TP M / TP 3M	TP 17	TP 17 / TP 37 / TP 38	
Dimensions	Ø 60 mm	Ø 60 mm	Ø 28 mm	
Material	Aluminium	Brass* / Aluminium	Brass	
Drillings	Order code			
1x 3.5 mm (1/8 in) 1x 6.5 mm (1/4 in)	EZ16360B02AL69	EZ15060B02MS27 / EZ15060D02AL18	EZ15028H02MS01	
1x 3.5 mm (1/8 in) 1x 6.5 mm (1/4 in) 1x 13.5 mm (1/2 in)	EZ16360B03AL19	EZ15060I03MS53 / EZ15060D03AL54	EZ15028B03MS17	
1x 3.5 mm (1/8 in) 1x 5.0 mm (3/16 in) 1x 6.5 mm (1/4 in) 1x 9.5 mm (3/8 in)	EZ16360C04AL46	EZ15060D04MS55 / EZ15060D04AL17	EZ15028G04MS44	
1x 3.5 mm (1/8 in) 6x 6.5 mm (1/4 in)	EZ16360C07AL44	EZ15060D07MS56 / EZ15060D07AL14	EZ15028D07MS22	
1x 3.5 mm (1/8 in) 2x 5.0 mm (3/16 in) 2x 6.5 mm (1/4 in) 2x 9.5 mm (3/8 in)	EZ16360C07AL45	EZ15060D07MS57 / EZ15060D07AL15	EZ15028G07MS43	
No drilling	EZ16360000AL00	EZ15060B00MS06 / EZ15060B00AL00	EZ15028000MS00	

\* Only for TP 17450

## Accessories // Certificates // Recalibration



Certificates	Order code
SIKA-Works calibration certificate 1st function	EKTPWP1FKT
SIKA-Works calibration certificate 2nd function	EKTPWP2FKT
SIKA-Works calibration certificate 3rd function	EKTPWP3FKT
SIKA-Works calibration certificate 4th function	EKTPWP4FKT
DAkks calibration certificate 1st function	EKTPDAKKS1FKT
DAkks calibration certificate 2nd function	EKTPDAKKS2FKT
DAkks calibration certificate 3rd function	EKTPDAKKS3FKT
DAkks calibration certificate 4th function	EKTPDAKKS4FKT
Additional test point DAkks-Certificate	EKTPDAKKSZUSP
SIKA-Works calibration certificate for calibrator and measuring inputs	EKTPWPMINST
DAkks-Certificate for calibrator and measuring inputs	EKTPDAKKSMINST

Recalibration	Order code
Document of pre-adjustment values (block) re-calibration (each function)	EKTPEW
Adjustment (block) re-calibration (each function)	EKTPJUSTAGE
Adjustment TT Scan and adjustment internal measuring instrument	EKTPJUSTAGESCAN



Accessories	For type	Order code
<b>Transport</b>		
Transport case	TP 17650	EZTPKOFFER002
	TP 17450, TPM 255	EZTPKOFFER003
	TP 17165, TP 17200, TP37 165, TP 37200	EZTPKOFFER004
	TP M165, TP 17166, TP 3M165	EZTPKOFFER005
	TP 37700	EZTPKOFFER006
	TP 18200	EZ999999990001
	TP 281300	EZ999999990006
	TP 18850	EZ999999990005
Transport case with trolley attachment frame	TP 17650	EZTPKOFFER002TG
	TP 17450, TPM 255	EZTPKOFFER003TG
	TP 17165, TP 17200, TP37 165, TP 37200	EZTPKOFFER004TG
	TP M165, TP 17166, TP 3M165	EZTPKOFFER005TG
	TP 37700	EZTPKOFFER006TG
Transport bag	TP 17000	XE2193
<b>PC</b>		
PC software (without TT-Scan)	TP 17200S, TP 17165S, TP 17166S, TP M165S, TP M255S, TP 17450S, TP 17650S, TP 281300E	EZ999999999971
PC software (with TT-Scan)	TP 17200S, TP 17165S, TP 17166S, TP M165S, TP M255S, TP 17450S, TP 17650S, TP 281300E	EZ380000000001
Converter RS485 to USB	TP 17200S, TP 17165S, TP 17166S, TP M165S, TP M255S, TP 17450S, TP 17650S, TP 281300E, TP 38165, TP38650	EZ170000000002
Converter RS232 to USB	TP 38165, TP 38650	EZ380000000002
Network switch	TP 37200, TP 37165, TP 3M165, TP 3M255	XE2103
Barcode scanner	TP 37200, TP 37165, TP 3M165, TP 3M255	XE2102
Wifi router	TP 37200, TP 37165, TP 3M165, TP 3M255	XE2101
<b>Calibration</b>		
Tripod	TP M165, TP M255	EZTPMSG0000000
Calibration liquid - Silicone oil 50 cSt (50...270 °C)	Calibrators with micro calibration bath fuction	EZSÖ0500000000
Calibration liquid - Silicone oil 20 cSt (7...220 °C)	Calibrators with micro calibration bath fuction	EZSÖ0200000000
Calibration liquid - Silicone oil 10 cSt (-35...155 °C)	Calibrators with micro calibration bath fuction	EZSÖ0100000000
Calibration liquid (Silicone oil), 5 cSt (-40...123°C)	Calibrators with micro calibration bath fuction	EZSÖ0050000000
Ext. reference sensor TFEE 255-3-300 (-55...255 °C)	TP 38165	W033P413000XX002
Ext. reference sensor TFEE 650-3-300 (-35...650 °C)	TP 38650	W034P413000XX002
Ext. reference sensor TF 255-3-300 (-55...255 °C)	TP 37200, TP 37165, TP 3M165, TP 3M255	W033P413000GX002
Customised linearisation TFEE	TP 38165, TP 38650	EKTTEE-LIN0000

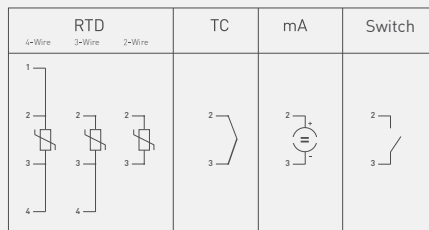
## Accessories // Measuring instrument // TT-Scan



Scanner unit TT-Scan

### Properties

#### Possibilities to connect



#### Version

Scanner device with precision measuring instrument

#### Measuring inputs

Switchable  
For up to 8 sensors  
Sensor type free configurable

#### General data

##### Power supply

230 VAC  $\pm 10\%$ , 50/60 Hz via adapter

##### Power consumption

Approx. 10 W

##### Dimensions (D x W x H)

200 x 140 + 40 x 380 mm

7.87 x 5.51 + 1.57 x 14.96 in

##### Weight

Approx. 2.5 kg

Approx. 5.51 lbs

#### Equipment features

32 x 4 mm/1.26 x 0.16 in connections free of thermal voltage  
Connection for external calibration reference sensor  
External cold junction available  
Serial USB data interface, incl. USB data cable

#### Options

Aluminium transport case, test & calibration software, DAkkS certificate, SIKa works certificate, external calibration reference sensors

## Accessories // Measuring instrument // TT-Scan // Measuring inputs

	Version	Measuring range		Tolerance	
<b>Resistance thermometer EN 60751</b>					
<b>Pt100</b> <b>Pt500</b> <b>Pt1000</b>	2-, 3-, 4-wire	-90.00 °C...850.00 °C	-130.00 °F...1562.0 °F	±0.005 % full scale ±0.01 °C	±0.005 % full scale ±0.02 °F
Connection possibility through 4 mm connections free of thermal voltage					
<b>Thermocouples according to DIN EN 60584 / DIN 43710</b>					
<b>Type K</b>	NiCr-NiAl	-90.00...999.99 °C 1000.0...1370.0 °C	-130.00...1831.9 °F 1832.0...2498.0 °F	±0.007 % full scale ±0.01 °C ±0.005 % full scale ±0.1 °C	±0.007 % full scale ±0.02 °F ±0.005 % full scale ±0.18 °F
<b>Type J</b>	FeCu-Ni	-90.00...900.00 °C	-130.00...1652.0 °F	±0.005 % full scale ±0.01 °C	±0.005 % full scale ±0.02 °F
<b>Type N</b>	NiCrSi - NiSiMg	-90.00...999.99 °C 1000.0...1370.0 °C	-130.00...1831.98 °F 1832.0...2498.0 °F	±0.007 % full scale ±0.01 °C ±0.005 % full scale ±0.1 °C	±0.007 % full scale ±0.02 °F ±0.005 % full scale ±0.18 °F
<b>Type E</b>	NiCr-CuNi	-90.00...700.00 °C	-130.00...1292.0 °F	±0.005 % full scale ±0.01 °C	±0.005 % full scale ±0.02 °F
<b>Type R</b>	Pt13Rh - Pt	0.00...999.99 °C 1000.0...1760.0 °C	32.00...1831.9 °F 1832.0...3200.0 °F	±0.05 % full scale ±0.01 °C ±0.03 % full scale ±0.1 °C	±0.05 % full scale ±0.02 °F ±0.03 % full scale ±0.18 °F
<b>Type T</b>	Cu-CuNi	-90.00...400.00 °C	-90.00...400.00 °F	±0.01 % full scale ±0.01 °C	±0.01 % full scale ±0.02 °F
<b>Type B</b>	Pt30Rh-Pt6Rh	0.00...999.99 °C 1000.0...1820.0 °C	32.00...1831.98 °F 1832.0...3308.0 °F	±0.05 % full scale ±0.01 °C ±0.03 % full scale ±0.1 °C	±0.05 % full scale ±0.02 °F ±0.03 % full scale ±0.18 °F
<b>Type S</b>	Pt10Rh-Pt	0.00...999.99 °C 1000.0...1760.0 °C	32.00...1831.98 °F 1832.0...3200.0 °F	±0.05 % full scale ±0.01 °C ±0.03 % full scale ±0.1 °C	±0.05 % full scale ±0.02 °F ±0.03 % full scale ±0.18 °F
<b>Type L</b>	Fe-CuNi	-90.00...900.00 °C	-130.00...1652.0 °F	±0.005 % full scale ±0.01 °C	±0.005 % full scale ±0.02 °F
<b>Type U</b>	Cu-CuNi	90.00...600.00 °C	194.00...1112.0 °F	±0.01 % full scale ±0.01 °C	±0.01 % full scale ±0.02 °F
Automatic comparison point compensation between 0 °C/32 °F and 60 °C/140 °F Accuracy of the comparison point Pt100 DIN class A Possibility of connection through 4 mm/0.16 in connections free of thermal voltage					
<b>Standard signal input</b>					
Current (switchable)	mA	0(4)...20 mA		±0.015 % full scale ±0.01 mA	
Transmitter supply 24 VDC, I <sub>max</sub> = 30 mA, Possibility of connection through 4 mm/0.16 in connections free of thermal voltage					
<b>Temperature switch</b>					
Automatic detection of an edge change, determining the hysteresis, Independent detection normally closed / normally open Potential-free input contacts (U <sub>max</sub> = 5 V, I <sub>max</sub> = 1 mA) Possibility of connection through 4 mm/0.16 in connections free of thermal voltage					
<b>Calibration reference sensor connection</b>					
Pt100	4-wire	-90.00...850.00 °C	-90.00...850.00 °F	±0.005 % full scale ±0.01 °C	±0.005 % full scale ±0.02 °F
Polynomial correctable through internal parameters or through external EEPROM inside the sensor Possibility of connection through 7-pin built-in socket					

Multi channel measuring instrument	Order code
8-channel measuring instrument	ET3849U0308003
SIKA-Works calibration certificate measuring inputs	EKTSCAN00000W
DAkKS-Certificate measuring inputs	EKTSCAN00000D
PC-Software (Block + measuring inputs)	EZ380000000001
Reference sensor TFEE 255-3-300 (-55...255 °C)	W033P413000XX002
Reference sensor TFEE 650-3-300 (-35...650 °C)	W034P413000XX002
Sensor specific linearization TFEE	EKTTEE-LIN0000
SIKA-Works certificate TF or TFEE	EKTMK0000000W
DAkKS-Certificate for TF or TFEE (-30...500 °C)	EKTMK0000000D

## Pneumatic // -0.95...60 bar



**P40.2 Basic**



**P60 Solid**

### Your Advantages

Type	P40.2	P60
	<ul style="list-style-type: none"> <li>• Testing, adjustment and calibration of all types of pressure gauges</li> <li>• 3 in 1: vacuum, low pressure and medium pressure calibration</li> <li>• Exact adjustment in the mbar range thanks to ultra-fine thread pitch and large volume control valve</li> <li>• Tool-free change between positive pressure and vacuum generation</li> </ul>	<ul style="list-style-type: none"> <li>• Like P40.2</li> <li>• Single pneumatic hand pressure pump up to 60 bar</li> </ul>

### Technical Data

Type	P40.2	P60
<b>Pressure ranges</b> → Negative pressure → Positive pressure	-0.95 bar 40 bar	-0.95 bar 60 bar
<b>Pressure medium</b>	Air	
<b>Connections</b>		
<b>Reference pressure gauge</b>	G $\frac{1}{4}$	
<b>Test sample</b>	G $\frac{1}{4}$ with quick coupling and pressure hose (1 m)	
<b>Basic</b>		
<b>Dimensions</b>	Approx. 240 x 170 x 50 mm	
<b>Weight</b>	Approx. 1.1 kg	
<b>Solid</b>		
<b>Dimensions (case)</b>	Approx. 450 x 370 x 110 mm	
<b>Weight</b>	Approx. 4.2 kg	
<b>+ Adapter kit</b>	Chrome-plated brass, G $\frac{1}{8}$ , G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$ , $\frac{1}{8}$ NPT, $\frac{1}{4}$ NPT, $\frac{1}{2}$ NPT, M12 x 1.5, M20 x 1.5, G $\frac{1}{8}$ , G $\frac{1}{4}$	
<b>+ Seal kit</b>	PA flat gaskets and O-rings	

Order code		
Type	Version	Order number
P40.2	Basic	EPPM040EBL0000
	Solid (incl. case and adapter)	EPPM0400BL0000
P60	Basic	EPPM060EBL0000
	Solid (incl. case and adapter)	EPPM0600BL0000

## Pneumatic // -0.3...4 bar



P4 Basic



P4 Solid

### Your advantages

Type	P4
	<ul style="list-style-type: none"> <li>• Testing, adjustment and calibration of all types of pressure gauges</li> <li>• Long-term stable measurements without pressure loss due to hermetically sealable vacuum chamber</li> <li>• Precise adjustment in the mbar range thanks to ultra-fine thread pitch and large volume control valve</li> <li>• Tool-free change between overpressure and vacuum generation</li> <li>• Smallest mobile hand test pump on the market</li> </ul>

### Technical data

Type	P4
<b>Pressure ranges</b> → Negative pressure → Positive pressure	-0.3 bar (depending on test sample / reference) 4 bar
<b>Pressure medium</b>	Air
<b>Connections</b>	
<b>Reference pressure gauge</b>	G $\frac{1}{4}$ female thread with PA hose (2 x 1 m)
<b>Test sample</b>	G $\frac{1}{4}$ with quick coupling and pressure hose (1 m)
<b>Basic</b>	
<b>Dimensions</b>	Approx. 225 x $\varnothing$ 55 mm
<b>Weight</b>	Approx. 980 g
<b>Solid</b>	
<b>Dimensions (case)</b>	Approx. 450 x 370 x 110 mm
<b>Weight</b>	Approx. 4.2 kg
<b>+ Adapter kit</b>	Chrome-plated brass, G $\frac{1}{8}$ , G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$ , $\frac{1}{8}$ NPT, $\frac{1}{4}$ NPT, $\frac{1}{2}$ NPT, M12 x 1.5, M20 x 1.5, G $\frac{1}{8}$ , G $\frac{1}{4}$
<b>+ Seal kit</b>	PA flat gaskets and O-rings

Order code		
Type	Version	Order number
P4	Basic	EPPM004EBL0000
	Solid (incl. case and adapter)	EPPM0040BL0000

## Hydraulic // 0...1000 bar



**P700.3 Basic**



**P1000.2 Solid**

### Your advantages

#### Type

**P700.3 / P1000.2**

- Testing, adjustment and calibration of all types of pressure gauges
- Precise adjustment thanks to ultra-fine thread pitch and large volume control valve
- High pressure generation with minimum effort
- Large calibration volume (300 ml)

### Technical data

Type	P700.3	P1000.2
Pressure range	0...700 bar	0...1000 bar
Pressure medium	Demineralized water or hydraulic oil	
<b>Connections</b>		
Reference pressure gauge	G $\frac{1}{4}$	
Test sample	G $\frac{1}{4}$ with quick coupling and pressure hose (1 m)	G $\frac{1}{4}$ with quick coupling and high pressure hose (1 m)
<b>Basic</b>		
Dimensions	Approx. 255 x 225 x 85 mm	
Weight	Approx. 1,7 kg	Approx. 1,9 kg
<b>Solid</b>		
Dimensions (case)	Approx. 450 x 370 x 125 mm	
Weight	Approx. 4,8 kg	Approx. 5 kg
+ Adapter kit	Stainless steel, G $\frac{1}{8}$ , G $\frac{1}{4}$ , G $\frac{3}{8}$ , G $\frac{1}{2}$ , $\frac{1}{8}$ NPT, $\frac{1}{4}$ NPT, $\frac{1}{2}$ NPT, M12 x 1.5, M20 x 1.5, G $\frac{1}{8}$ , G $\frac{1}{4}$	
+ Seal kit	PA flat gaskets and O-rings	

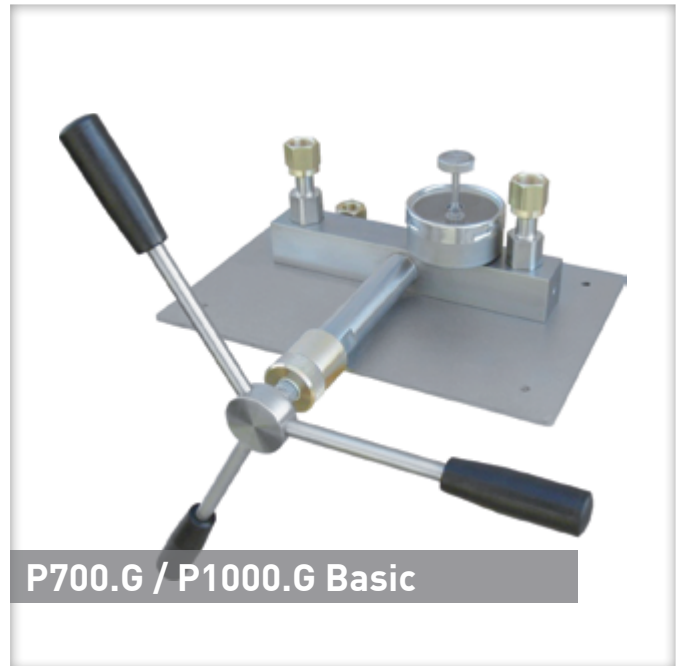


Order code		
Type	Version	Order number
<b>P700.3</b>	Basic	EPPM700EBL0003
	Solid (incl. case and adapter)	EPPM7000BL0003
<b>P1000.2</b>	Basic	EPPM1K0EBL0002
	Solid (incl. case and adapter)	EPPM1K00BL0002

## Hydraulic // 0...1400 bar



**P700.T Basic**



**P700.G / P1000.G Basic**

### Your advantages

Type	P700.T	P700.G2 / P700.GW / P1000.GW / P1400.G
	<ul style="list-style-type: none"> <li>• Simultaneous calibration of several test samples thanks to large tank volume</li> <li>• Fast pressure generation with low effort</li> </ul>	<ul style="list-style-type: none"> <li>• Oil-free pressure generation up to 1000 bar</li> <li>• Simple and fast pressure generation with smooth-running spindle</li> </ul>

### Technical data

Type	P700.T	P700.G2	P700.GW	P1000.GW	P1400.G
<b>Version</b>	Lever pump	Spindle pump			
<b>Pressure range</b>	0...700 bar	0...700 bar	0...700 bar	0...1000 bar	0...1400 bar
<b>Pressure medium</b>	Hydraulic oil		Demineralized water		Hydraulic oil
<b>Connections</b>					
<b>Reference pressure gauge</b>	G1/4	G3/8 left, G1/4, G1/2			
<b>Test sample</b>	G1/4 with quick coupling and pressure hose (1 m)	G3/8 left, G1/4, G3/8, G1/8			
<b>Basic</b>					
<b>Dimensions</b>	Approx. 500 x 110 x 160 mm	Approx. 340 x 225 x 130 mm			
<b>Weight</b>	Approx. 5.6 kg	Approx. 9.9 kg			
<b>Solid</b>					
<b>Dimensions (case)</b>	Approx. 575 x 470 x 230 mm	Approx. 450 x 370 x 150 mm			
<b>Weight</b>	Approx. 10.2 kg	Approx. 12.6 kg			
<b>+ Adapter kit</b>	Stainless steel, G1/8, G1/4, G3/8, G1/2, 1/8 NPT, 1/4 NPT, 1/2 NPT, M12 x 1.5, M20 x 1.5, G1/8, G1/4				
<b>+ Seal kit</b>	PA flat gaskets and O-rings				

Order code			
Type	Version		Order number
<b>P700T</b>	Lever pump	Basic	EPPT700E000020
		Solid (incl. case and adapter)	EPPT7000000020
<b>P700.G2</b>	Spindle pump	Basic	E8PG700E000020
		Solid (incl. case and adapter)	E8PG7000000020
<b>P700.GW</b>		Basic	E8PG700E000010
		Solid (incl. case and adapter)	E8PG7000000010
<b>P1000.GW</b>		Basic	E8PG1K0E000010
	Solid (incl. case and adapter)	E8PG1K00000010	
<b>P1400.G</b>	Basic	E8PG1K4E000020	
	Solid (incl. case and adapter)	E8PG1K40000020	

-1...1000 bar




**Your advantages**

Type	E2 / D2 / C2
	<ul style="list-style-type: none"> <li>• Suitable for aggressive media</li> <li>• Illuminated display</li> <li>• Robust and compact design with edge protection</li> <li>• Including test certificate</li> </ul>

**Technical data**

Type	E2	D2	C2
<b>Pressure ranges</b>	Between -1...1000 bar		
<b>Accuracy (full scale)</b>	0.5 %	0.1 %	0.05 %
<b>Adjustment options</b>			
<b>Linearisation</b>	Via adapter		
<b>Tare / Zero</b>	✓		
<b>Selectable units</b>			
<b>Pressure</b>	bar, mbar, kPa, MPa, PSI, kg/cm <sup>2</sup> , mH <sub>2</sub> O, inH <sub>2</sub> O		
<b>Features</b>			
<b>Measuring inputs</b>	1 x direct		
<b>Display</b>			
<b>Display Functions</b>	Multi-functional LCD, 4 ½ digit, with illumination Bargraph, display filter, min / max value		
<b>Measuring rate</b>			
<b>Standard Peak</b>	10 ms		
<b>Process connection</b>			
<b>Thread</b>	G¼		
<b>Material</b>	Stainless steel 1.4404		
<b>Medium temperature</b>	-20...80 °C		
<b>For aggressive media</b>	✓		

General data	
Type	E2 / D2 / C2
Housing	
Degree of protection	IP67
Dimension	Ø 80 mm, T=30 mm H=100 mm
Material	Zinc casting
Operating temperature	0...50 °C
Weight	540 g
Power supply	
Auto-off function	✓
Battery type	2x 1,5 V AA
Battery operation	1500 h
Approvals	
	DNV GL type approval Certificate No. TAA00001CJ
Certificate (optional)	
DAkkS certificate Works certificate	

Order code						
Type	Accuracy (full scale)	Pressure range	Resolution	Order number		
<b>E2</b>	0.5 %	-1...3 bar	1 mbar	EME8REF-E2-0003		
		-1...5 bar	1 mbar	EME8REF-E2-0005		
		-1...10 bar	1 mbar	EME8REF-E2-0010		
		-1...20 bar	1 mbar	EME8REF-E2-0020		
		-1...40 bar	10 mbar	EME8REF-E2-0040		
		-1...60 bar	10 mbar	EME8REF-E2-0060		
		0...100 bar	10 mbar	EME8REF-E2-0100		
		0...160 bar	10 mbar	EME8REF-E2-0160		
		0...250 bar	100 mbar	EME8REF-E2-0250		
		0...400 bar	100 mbar	EME8REF-E2-0400		
		0...700 bar	100 mbar	EME8REF-E2-0700		
		0...1000 bar	100 mbar	EME8REF-E2-1000		
		<b>D2</b>	0.1 %	-1...3 bar	1 mbar	EME8REF-D2-0003
				-1...5 bar	1 mbar	EME8REF-D2-0005
-1...10 bar	1 mbar			EME8REF-D2-0010		
-1...20 bar	1 mbar			EME8REF-D2-0020		
-1...40 bar	10 mbar			EME8REF-D2-0040		
-1...60 bar	10 mbar			EME8REF-D2-0060		
0...100 bar	10 mbar			EME8REF-D2-0100		
0...160 bar	10 mbar			EME8REF-D2-0160		
0...250 bar	100 mbar			EME8REF-D2-0250		
0...400 bar	100 mbar			EME8REF-D2-0400		
0...700 bar	100 mbar			EME8REF-D2-0700		
0...1000 bar	100 mbar			EME8REF-D2-1000		
<b>C2</b>	0.05 %			-1...10 bar	1 mbar	EME8REF-C2-0010
				-1...20 bar	1 mbar	EME8REF-C2-0020
		-1...40 bar	10 mbar	EME8REF-C2-0040		
		-1...60 bar	10 mbar	EME8REF-C2-0060		
		0...100 bar	10 mbar	EME8REF-C2-0100		
		0...160 bar	10 mbar	EME8REF-C2-0160		
		0...250 bar	100 mbar	EME8REF-C2-0250		
		0...400 bar	100 mbar	EME8REF-C2-0400		
		0...700 bar	100 mbar	EME8REF-C2-0700		
		0...1000 bar	100 mbar	EME8REF-C2-1000		

**BEST  
SELLER**

Type		Order number
<b>E2</b>	Accuracy 0,5 %, pressure range -1...3 bar, resolution 1 mbar	EME8REF-E2-0003
	Accuracy 0,5 %, pressure range -1...40 bar, resolution 10 mbar	EME8REF-E2-0040
	Accuracy 0,5 %, pressure range 0...700 bar, resolution 100 mbar	EME8REF-E2-0700
	Accuracy 0,5 %, pressure range 0...1000 bar, resolution 100 mbar	EME8REF-E2-1000
<b>D2</b>	Accuracy 0,1 %, pressure range -1...3 bar, resolution 1 mbar	EME8REF-D2-0003
	Accuracy 0,1 %, pressure range -1...40 bar, resolution 10 mbar	EME8REF-D2-0040
	Accuracy 0,1 %, pressure range 0...700 bar, resolution 100 mbar	EME8REF-D2-0700
	Accuracy 0,1 %, pressure range 0...1000 bar, resolution 100 mbar	EME8REF-D2-1000

# -1...1000 bar




## Your advantages

Type	E-Ex	D-Ex	L-Ex
	<ul style="list-style-type: none"> <li>• For use in potentially explosive atmospheres</li> <li>• Suitable for aggressive media</li> <li>• Robust and compact design with edge protection</li> <li>• Certificate (optional)</li> </ul>		<ul style="list-style-type: none"> <li>• Like E-Ex / D-Ex</li> <li>• Additional PC interface for direct data transfer</li> <li>• Higher accuracy</li> <li>• Certificate (optional)</li> </ul>

## Technical data

Type	E-Ex	D-Ex	L-Ex
<b>Pressure ranges</b>	Between -1...300 bar	Between -1...700 bar	Between -1...1000 bar
<b>Accuracy (full scale)</b>	0.5 %	0.1 %	0.05 %
<b>Adjustment options</b>			
<b>Tare / Zero</b>	✓		
<b>Selectable units</b>			
<b>Pressure</b>	bar	bar, mbar, hPa, kPa, MPa, PSI, kp/cm <sup>2</sup>	bar, mbar, hPa, kPa, MPa, PSI, mmHg, inHg, cmH <sub>2</sub> O, mH <sub>2</sub> O, inH <sub>2</sub> O, ftH <sub>2</sub> O, Kp/cm <sup>2</sup>
<b>Features</b>			
<b>Measuring inputs</b>	1 x direct		1 x direct
<b>PC connection</b>			RS 485
<b>Display</b>			
<b>Display</b>	Multi-functional LCD, 4 digit		Multi-functional LCD, 5 digit
<b>Min / Max value</b>	✓		✓
<b>Measuring rate</b>			
<b>Standard</b>	500 ms		
<b>Process connection</b>			
<b>Thread</b>	G $\frac{1}{4}$ / H16 UNF		G $\frac{1}{4}$
<b>Material</b>	Stainless steel 1.0718 zinc-plated / Stainless steel 1.4435		Stainless steel 1.4435
<b>Medium temperature</b>	0...50 °C		0...50 °C
<b>For aggressive media</b>	✓		✓

General data			
Type	E-Ex	D-Ex	L-Ex
<b>Housing</b>			
Degree of protection	IP65		IP65 (Front) / IP54
Dimension	Ø 70 mm, T=30 mm H=100 mm		Ø 80 mm, T=40 mm H=120 mm
Material	ABS plastic		ABS plastic
Operating temperature	0...50 °C		0...50 °C
Weight	130 g		210 g
<b>Power supply</b>			
Auto-off function	✓		✓
Battery type	1x 3 VCR		1x 3 VCR
Battery operation	1000 h		2000 h
<b>Approvals</b>			
	Ex II 1G EEx ia II C T5/T6		Ex II 2G Ex ia II C T6
<b>Certificates (optional)</b>			
DAkkS certificate			
Works certificate			

Order code			
Type	Accuracy (full scale)		
E-Ex	0.5 %		EME8REF-E-EX
D-Ex	0.1 %		EME8REF-D-EX
L-Ex	0.05 %		EME8REF-L-EX
Pressure range		Resolution	
E-Ex	-1...30 bar	10 mbar	030
	0...300 bar	100 mbar	300
D-Ex	-1...3 bar	1 mbar	003
	-1...30 bar	10 mbar	030
	-1...60 bar	10 mbar	060
	0...300 bar	100 mbar	300
	0...700 bar	200 mbar	700
L-Ex	-1...2 bar (relative)	0.1 mbar	002R
	-1...10 bar (relative)	1 mbar	010R
	-1...20 bar (relative)	1 mbar	020R
	0...3 bar (absolute)	0.1 mbar	003A
	0...11 bar (absolute)	1 mbar	011A
	0...21 bar (absolute)	1 mbar	021A
	0...200 bar (absolute)	10 mbar	200R
	0...400 bar (absolute)	50 mbar	400R
	0...700 bar (absolute)	100 mbar	700R
	0...1000 bar (absolute)	100 mbar	01KR
<b>Example order number</b>			<b>EME8REF-E-EX 030</b>



-1...2000 bar



J

#### Your advantages

Type	J
	<ul style="list-style-type: none"> <li>• Data logger and PC interface for direct data transfer (software optional)</li> <li>• Suitable for aggressive media</li> <li>• Including test certificate</li> </ul>

#### Technical data

Type	J
Pressure ranges	Between -1...2000 bar
Accuracy (full scale)	Max. 0.1 %
<b>Adjustment options</b>	
Linearisation	6 points
Tare / Zero	✓
<b>Selectable units</b>	
Pressure	bar, mbar, hPa, kPa, MPa, PSI, mmHg, inHg, cmH <sub>2</sub> O, mH <sub>2</sub> O, inH <sub>2</sub> O, kg/cm <sup>2</sup>
Temperature	°C, °F
<b>Features</b>	
Measuring inputs	1 x direct
PC interface	USB (B)
<b>Data memory</b>	
Number of memory	660 000 values (auto)
Recording interval	1 s...10 h
Recording duration	1 min...1000 h
Data sets	Pressure / Temperature
<b>Display</b>	
Display	Multi-functional LCD, 4 digit, with illumination
Functions	Bargraph, display filter, min / max values
<b>Measuring rate</b>	
Standard	100 ms
<b>Process connection</b>	
Thread	G½
Material	Stainless steel 1.4542
Medium temperature	-10...70 °C
For aggressive media	✓

General data	
Type	J
Housing	
Degree of protection	IP65 (front) / IP40
Dimension	86 x 86 mm, T=40 mm H=135 mm
Material	Aluminium
Operating temperature	-10...70 °C
Weight	900 g
Power	
Auto-off function	✓
Battery type	internal accu
Ext. power	USB
Battery operation	2000 h
Certificate (optional)	
DAkkS certificate	
Works certificate	

Order code					
Type	Accuracy (full scale)				
J	0.2%	EME8REF	J2		
	0.1%	EME8REF	J1		
Zero point					
0 bar			R		
-1 bar			V		
Pressure range	Resolution				
0...100 mbar	0.1 mbar		100M		
0...250 mbar	0.1 mbar		250M		
0...500 mbar	0.1 mbar		500M		
[-1]/0...1 bar	1 mbar		001B		
[-1]/0...2.5 bar	1 mbar		003B		
[-1]/0...5 bar	1 mbar		005B		
[-1]/0...10 bar	10 mbar		010B		
[-1]/0...20 bar	10 mbar		020B		
[-1]/0...40 bar	10 mbar		040B		
[-1]/0...60 bar	10 mbar		060B		
0...100 bar	100 mbar		100B		
0...250 bar	100 mbar		250B		
0...350 bar	100 mbar		350B		
0...500 bar	100 mbar		500B		
0...700 bar	100 mbar		700B		
0...1000 bar	1 bar		01KB		
0...1500 bar	1 bar		15KB		
0...2000 bar	1 bar		02KB		
Example order number		EME8REF	J2	R	100M

-1...2500 bar



P

#### Your advantages

Type	P
	<ul style="list-style-type: none"><li>• Suitable for aggressive media</li><li>• For relative pressure and vacuum</li><li>• PC interface for direct data transfer</li><li>• Including test certificate</li></ul>

#### Technical data

Type	P
Pressure ranges	Between -1...2500 bar
Accuracy (full scale)	0.5 %, 0.2 % or 0.05 %
Adjustment options	
Linearisation	6 point
Tare / Zero	✓
Selectable units	
Pressure	bar, mbar, kPa, MPa, PSI
Features	
Measuring inputs	1 x direct
PC interface (optional)	RS232
Display	
Display Functions	Multi-functional LCD, 4 digit (0.5 % / 0.2 %), 5 digit (0.05 % / 0.025 %) Bargraph, display filter, min / max values
Measuring rate	
Standard	100 ms
Process connection	
Thread	G1/2
Material	Stainless steel 1.4542
Medium temperature	0...50 °C
For aggressive media	✓

General data	
Type	P
Housing	
Degree of protection	IP65 (front) / IP40
Dimension	86 x 86 mm, T=40 mm H=135 mm
Material	Aluminium
Operating temperature	0...50 °C
Weight	900 g
Power	
Auto-off function	✓
Battery type	2 x 1,5 V AAA
Battery operation	8000 h
Certificate (optional)	
DAkkS certificate	
Works certificate	

Order code						
Type	Accuracy (full scale)					
P	0,5 %			EME8REF	P5	
	0,2 %			EME8REF	P2	
	0,05 %			EME8REF	P0	
Zero point						
0 bar						R
-1 bar						V
Pressure range	Resolution	0,5 %	0,2 %	0,05 %		
0...500 mbar		1 mbar	0,1 mbar	0.1 mbar		500M
(-1)/0...1 bar		1 mbar	1 mbar	0.1 mbar		001B
(-1)/0...2.5 bar		1 mbar	1 mbar	0.5 mbar		003B
(-1)/0...5 bar		1 mbar	1 mbar	0.5 mbar		005B
(-1)/0...10 bar		10 mbar	10 mbar	1 mbar		010B
(-1)/0...20 bar		10 mbar	10 mbar	2 mbar		020B
(-1)/0...40 bar		10 mbar	10 mbar	5 mbar		040B
(-1)/0...60 bar		10 mbar	10 mbar	5 mbar		060B
0...100 bar		100 mbar	100 mbar	10 mbar		100B
0...250 bar		100 mbar	100 mbar	20 mbar		250B
0...350 bar		100 mbar	100 mbar	50 mbar		350B
0...500 bar		100 mbar	100 mbar	50 mbar		500B
0...700 bar		100 mbar	100 mbar	50 mbar		700B
0...1000 bar		1 bar	1 bar	100 mbar		01KB
0...1500 bar		1 bar	1 bar	200 mbar		15KB
0...2000 bar		1 bar	1 bar	500 mbar		02KB
0...2500 bar		1 bar	1 bar			25KB
Interface						
Without						0
RS 232						S
Example order number				EME8REF	P5	R 500M 0

## Accessoires // Test pumps // Digital pressure gauges



Case



DAkKS-Certificate



Dirt trap



Adapter G $\frac{1}{4}$  - G $\frac{1}{4}$



Pressure hose

For pneumatic test pumps		Order code
Hose	Polyamid, 1 m, chromed cap nut G $\frac{1}{4}$ (female)	EPPM040SCHLA01
DIN adapter set	Chromed brass, 11 adapter, G $\frac{1}{4}$ (female) - xxx	EPPM040ADAPT01
DIN single adapter	Chromed brass, lasered, G $\frac{1}{4}$ (male) -xxx	
	G $\frac{1}{4}$ A - G $\frac{1}{8}$ I	FHP011
	G $\frac{1}{4}$ A - G $\frac{3}{8}$ I	FHP012
	G $\frac{1}{4}$ A - G $\frac{1}{2}$ I	FHP013
	G $\frac{1}{4}$ A - NPT $\frac{1}{8}$ I	FHP014
	G $\frac{1}{4}$ A - NPT $\frac{1}{4}$ I	FHP015
	G $\frac{1}{4}$ A - NPT $\frac{1}{2}$ I	FHP016
	G $\frac{1}{4}$ A - M12 x 1,5 I	FHP017
	G $\frac{1}{4}$ A - M20 x 1,5 I	FHP018
	G $\frac{1}{4}$ A - G $\frac{1}{8}$ A	FHP019
	G $\frac{1}{4}$ A - G $\frac{1}{4}$ A	FHP020
	G $\frac{1}{4}$ A - G $\frac{1}{4}$ I	FHP021
DIN seal set for DIN adapter	Different o-rings and thread tape seals in plastic box	EPPM040DICHT01
reducing adapter P40 adapter set	Chromed brass, G $\frac{1}{4}$ (male) - G $\frac{1}{8}$ (female)	EPPM040ADAPP40
Dirt trap	Up to max. 35 bar	EME8IDT6001000
Service kit seal set P40.2/ P60	Internal main piston and valve seals	EPPM040DICHT02
Fine adjust/ release valve	Complete valve system	EPPM040REGVE01
Replacement valve P40.2/ P60	Inlet and outlet valve incl. seals for replacement	EPPM040VENTIL01
Case blue P4	SIKA logo, foam lining and rigid foam inlay	XHP 180
Case blue P40.2/ P60	SIKA logo, foam lining and rigid foam inlay	EPPM040KOFFE01
Case grey P40.2/ P60	Neutral version, foam lining and rigid foam inlay	EPPM040KOFFE02
Rotary union	Brass G $\frac{1}{4}$ (male) - G $\frac{1}{2}$ (female)	EPPM040WIRBEL01

For hydraulic test pumps		Order code
Hose (1 m)	Polyamide, MiniMess®, chromed cap nut MM1620 (female)	XHP104
Hose (2 m)	Polyamide, MiniMess®, chromed cap nut MM1620 (female)	XHP117
High pressure hose P1000.2	Chromed cap nut with 2 adapters G¼ (male) - G¼ (female)	EME8HP10000000
Pressure gauge connection	MiniMess®, bulk head, chromed steel, MM1620 (male) - G¼ (female)	XHP103
Testpoint	MiniMess®, coupling, chromed steel MM1620 (male) - G¼ (male)	XHP214
Rotary union	MiniMess® direct connection, chromed steel M1620 (female) - G¼ (female)	EME81620I-G14I
DIN adapter set	Stainless steel, 11 adapter, G¼ (male) - xxx	EPPM700ADAPT01
DIN single adapter	Stainless steel, lasered, G¼ (male) - xxx	
	G¼ A - G¼ I	FHP033
	G¼ A - G¾ I	FHP034
	G¼ A - G½ I	FHP035
	G¼ A - NPT¼ I	FHP022
	G¼ A - NPT¼ I	FHP036
	G¼ A - NPT½ I	FHP023
	G¼ A - NPT¾ I	FHP024
	G¼ A - M12 x 1,5 I	FHP037
	G¼ A - M20 x 1,5 I	FHP038
	G¼ A - G¼ A	FHP039
	G¼ A - G¼ A	FHP040
	G¼ A - G¼ I	FHP041
DIN seal set for DIN adapter	Different o-rings and thread tape seals in plastic box	EPPM040DICHT01
Cone seal Ref. P, Q, R, J	>1500 bar	EME8AECONO000
Hydraulic oil	plastic bottle, 0.25 litre	EZH00100000000
Case blue P700.3 / P1000.2	SIKA logo, foam lining and rigid foam inlay	XHP 212

For digital pressure gauges		Order code
All types	DAkkS certificate (10 measuring points, no vacuum)	EKDRUCK000000D
	SIKA works certificate (10 measuring points)	EKDRUCK000000W
Type P	RS 232 C cable	EME8AEQCCABLE0
	Linearisation type P (0.05%): accuracy 0.025 % full scale (from ≥ 10 bar)	On request
Type P / J	Software calibration (PresKal)	EME8AEPCSW0000
	Software monitoring (DEMO)	EME8AESWTDENKA
Type J	Software Datalogger (Analyzer Light)	EME8AESWANALLI
Type L-Ex / E-Ex / D-Ex	Oil and greasefree version up to max. 200 bar, 60 °C	On request

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Астрахань (8512)99-46-04  
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