We measure it. **testo**

testo 184 T3
Rec
4.2 °C
START STOP
Alarm
Battery
Mode
testo

2 °C
36 °F

Blackbox for
sensitive freight.

testo 184 Data logger: Temperature monitoring and quality data documentation
in the transport of foods and pharmaceutical goods.

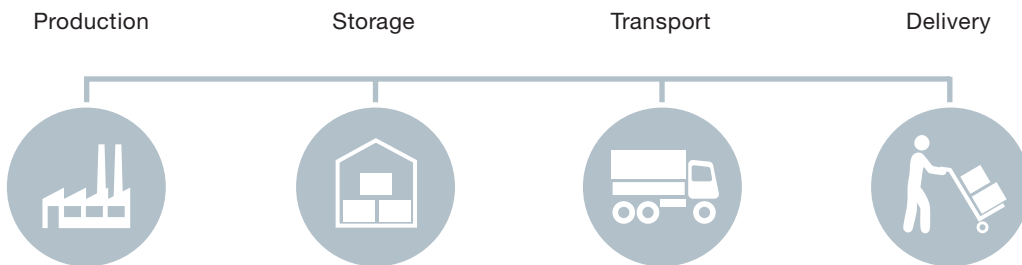# Optimum temperatures for sensitive goods.

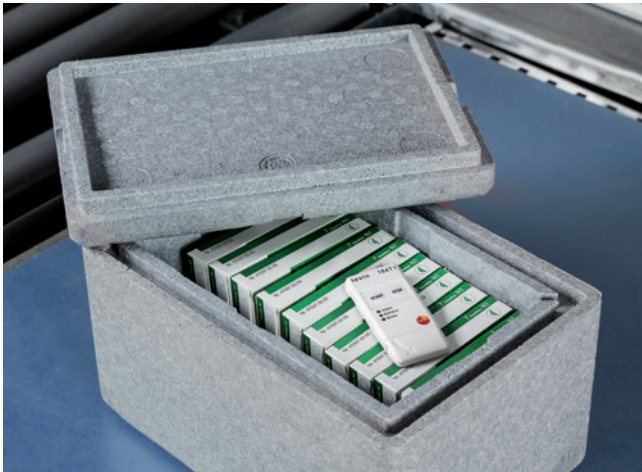Monitoring Temperature, Humidity and Shock within the cold chain sector with the testo 184 data loggers.

Whether you work in food or pharma: Both groups have certain refrigeration requirements in transport, and the process of the cold chain between the manufacturer and customer, may under no circumstances be interrupted. Quality deficits, financial losses or even serious damage to the health of the consumer or patient can be the consequence.

With the testo 184 data loggers, you can monitor every step of the cold chain. The loggers travel on your behalf in freight and loading rooms, monitoring temperatures during the transport of sensitive goods on rail, in the air or on the road.

At their destination, your see at a glance whether the configured limit values have been adhered to. In order to obtain detailed information, you may connect the logger to a PC to produce a PDF report immediately.

In order for you to be able to work more efficiently with the data loggers, all required files and information are stored directly and securely in the testo 184: Configuration file, calibration certificate (testo 184 T1 to T4 only), instruction manual and PDF report of your recorded measurement data.

Production   Storage   Transport   Delivery

Temperature monitoring in pharmaceutical logistics

A visit from a GMP inspector can be difficult or easy. If data for refrigeration during the transport of the last API delivery is incorrect, or the documentation of the temperature values is incomplete, you have an issue. In the worst case, there is a threat of product recall, huge financial deficits and the loss of your good reputation in the pharmaceutical industry.

Equally, a visit from a GMP inspector can be routine for you, with the testo 184 data logger, all (bio-)pharamceuticals can be protected from unnoticed gaps in the cold chain, and the entire distribution path mon-itored and documented simply, securely and compliantly with all common standards, guidelines and regulations:

- The temperature data loggers T1, T2, T3 and T4 are delivered with a calibration certificate traceable according to ISO 17025, which is stored as a PDF directly in the logger.
- Thanks to the use of the ComSoft CFR software, 21 CFR Part 11-compliant applications with all testo 184 data loggers are possible.
- For the purposes of analysis stability within the data, the loggers offer you automatic MKT-value calculations, and the option of setting MKT alarms.

- The comprehensive alarm management allows the setting of multiple alarm limits. It is also possible to set cumulative alarms.

- The extremely intuitive operation and the easy identification of alarms, will lead to a low training requirement for your staff.

Temperature monitoring in food logistics

The adherence to pre-defined temperature values is of paramount significance in the transport of food. This is the only way legal hygiene standards can be fulfilled and the quality, safety and preservation of foodstuffs guaranteed. The precise monitoring of the complex processes and procedures is defined in HACCP guidelines (Hazard Analysis Critical Control Points), whose purpose is the prevention of health risks in the food sector.

The testo 184 data loggers are certified by HACCP International, and are created for the monitoring of food product storage in transport, from the farmer to the supermarket customer. The documentation of data is extremely easy thanks to the convenient readout function by automatically generated PDF reports. Ensuring temperature sensitive foods, arrive safely.

Plug and Play.

All advantages of the data loggers testo 184 at a glance.

Original size

Clear indication of alarms
A glance at the display or the LEDs is enough to know whether limit values have been triggered during transport.

Easiest operation
testo 184 is intuitively operated, and can be used without special training or previous knowledge: The "Start" button begins data recording. "Stop" ends it.

Easiest configuration
In each testo 184, a configuration file is stored. Which means no software download, no installation, no user interface and no additional costs.

Convenient readout
A PDF report is created within the loggers, highlighting the transport data for analysis. This is suitable for long-term archiving according to PDF/A standard.

Mobile readout/printout on site
All testo 184 data loggers can be read out on site with an NFC-capable Android phone. Data transfer from the data logger to a compatible Testo printer also functions wirelessly via NFC.

IT-safe
The testo 184 data loggers work securely without software installation or download, so IT problems should be a thing of the past.

GxP, CFR, HACCP and EN 12830.

The most important standards for the transport of pharmaceuticals goods and foods at a glance.

GxP-guidelines

In a GxP-regulated environment, especially high demands are placed on quality management. Not only GMP or GLP, but also GDP (Good Distribution Practice) guidelines play an increasingly important part. Since the distribution of pharmaceutical products is nothing more than mobile storage, the same rules apply here as in production, with regards to monitoring and quality assurance. With the help of the testo 184 data logger, GxP-compliant work is no problem for you.

ISO 9001:2008

ISO 9001:2008 is the most significant international norm for quality management systems, and guarantees the framework conditions for a high level of quality-capability for products and processes. In connection with this, it is important to be fully informed of the professional quality assurance of the the suppliers involved in the process. Testo AG, as an ISO 9001:2008 certified company, fully complies with these requirements, and ensures the adherence to the norms through internal audits as well as accredited external audits.

FDA 21 CFR Part 11

The FDA regulation 21 CFR Part 11, on which, among others, Appendix 11 of the EU-GMP is based, makes stipulations on electronically stored documents in which electronic signatures are made.
The use of the testo 184 data loggers in combination with the ComSoft CFR software provides, among other things: Limitation of access to authorised persons, Audit Trails with time stamp, as well as electronic signatures, allowing 21 CFR Part 11-compliant use of the data loggers.

HACCP International certification

HACCP International is a leading organisation in the field of food safety, and tests products for their suitability for processes in a food environment, according to the international HACCP guidelines. The testo 184 data loggers are certified as "food-safe" by HACCP International, and thus can be recommended without restriction for use in the HACCP environment.

EN 12830

The standard EN 12830 establishes the technical and functional properties of temperature registration instruments for transport, storage and distribution plants for chilled, frozen or deep frozen foods and ice-cream. The testo 184 T1, T2, T3 and T4 transport loggers, fulfil these requirements, and have been correspondingly certified by TÜV.

Safe monitoring of
temperature, humidity and shock.

Overview of the testo 184 data loggers.

	testo 184 T1	testo 184 T2	testo 184 T3	
Measurement parameters	Temperature	Temperature	Temperature	
Exchangeable battery	–	–	✅	
Operating time	90 days	150 days	Unlimited	
Battery life	–	–	500 days (at +25 °C and 15 min. meas. cycle)	
Measuring range	-35 to +70 °C	-35 to +70 °C	-35 to +70 °C	
Resolution	0.1 °C	0.1 °C	0.1 °C	
Accuracy	±0.5 °C	±0.5 °C	±0.5 °C	
Storage temperature	-55 to +70 °C	-55 to +70 °C	-55 to +70 °C	
Measurement rate	1 min to 24 h	1 min to 24 h	1 min to 24 h	
Memory	16000 readings	40000 readings	40000 readings	
Protection class	IP67	IP67	IP67	
Alarm identification	by LEDs	by LEDs and display	by LEDs and display	
Readout via NFC	✅	✅	✅	
Automatic PDF generation	✅	✅	✅	
Temperature calibration certificate traceable according to ISO 17025	✅	✅	✅	
EN 12830-certified	✅	✅	✅	
HACCP-certified	✅	✅	✅	
Compatible with testo ComSoft CFR 21 Part 11	✅	✅	✅	

	testo 184 T4	**testo 184 H1**	**testo 184 G1**
	Temperature	Temperature/humidity	Temperature/humidity/shock
	✅	✅	✅
	Unlimited	Unlimited	Unlimited
	100 days (at -80 °C and 15 min. meas. cycle)	500 days (at +25 °C and 15 min. meas. cycle)	120 days (at +25 °C and 15 min. meas. cycle)
	-80 to +70°C	-20 to +70 °C / 0 to 100 %RH	-20 to +70 °C / 0 to 100 %RH / 0 to 10 g
	0.1 °C	0.1 °C / 0.1 %RH	0.1 °C / 0.1 %RH / 0.1 g
	±0.8 °C (-80 to -35.1 °C) ±0.5 °C (-35 to +70 °C)	±0.5 °C (0 to +70 °C) ±0.8 °C (-20 to 0 °C) ±1.8 %RH + 3% of m.v. at +25 °C (5 to 80 %RH) ±0.03 %RH / K (0 to +60 °C)	±0.5 °C (0 to +70 °C) ±0.8 °C (-20 to 0 °C) ±1.8 %RH + 3% of m.v. at +25 °C (5 to 80 %RH) ±0.03 %RH / K (0 to +60 °C) ±0.1 g + 5 % of m.v.
	-80 to +70 °C	-55 to +70 °C	-55 to +70 °C
	1 min to 24 h	1 min to 24 h	1 min to 24 h
	40000 readings	64000 readings	64000 readings (temperature and humidity) + 1000 readings (shock)
	IP67	IP30	IP30
	by LEDs	by LEDs and display	by LEDs and display
	✅	✅	✅
	✅	✅	✅
	✅	–	–
	✅	–	–
	✅	✅	✅
	✅	✅	✅

Ordering information
testo 184 Data loggers.

testo 184 T1

- Measurement parameter: Temperature
- Operating time: 90 days
- Available in packs of: 1, 10 and 50 off

Part no. 0572 1841   £49.00

testo 184 T2

- Measurement parameter: Temperature
- Operating time: 150 days
- Available in packs of: 1, 10 and 50 off

Part no. 0572 1842   £65.00

Wall holder
Part no. 0192 1963

testo 184 T3

- Measurement parameter: Temperature
- Operating time: unlimited
- Available in packs of: 1, 10 and 50 off

Part no. 0572 1843   £99.00

Wall holder
Part no. 0192 1963

testo 184 T4

- Measurement parameter: Temperature
- Operating time: unlimited
- Available in packs of: 1 and 10 off

Part no. 0572 1844   £169.00

Wall holder
Part no. 0192 1963

testo 184 H1

- Measurement parameters: Temperature and humidity
- Operating time: unlimited
- Available in packs of: 1, 10 and 50 off

Part no. 0572 1845   £135.00

Wall holder
Part no. 0192 1963

testo 184 G1

- Measurement parameters: Temperature, humidity and shock
- Operating time: unlimited
- Available in packs of: 1

Part no. 0572 1846   £249.00

Wall holder included

Testo Limited

Newman Lane
Alton, Hampshire
GU34 2UR

Tel: 01420 544433
Fax: 01420 544434

www.testolimited.com