

# HACCP data logger system

testo 191 – temperature and pressure monitoring in sterilization, pasteurization and freeze-drying processes

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Simply more intuitive: user-friendly software with guided measurement and documentation processes, along with 1-click report

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Simply more secure: battery and measuring technology in two separate housings – for secure battery replacement and tightly sealed loggers

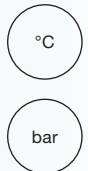
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Simply faster: simultaneous configuration and readout of up to eight loggers via multifunction case

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Simply more flexible: intelligent battery concept enables different heights for versatile use in your process

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The testo 191 HACCP data logger system for pasteurization, sterilization and freeze-drying processes enables the intelligent monitoring of temperature and pressure in thermal preservation processes. 4 temperature loggers, 1 pressure logger and suitable accessories offer the appropriate solution for every measurement application – whether in products, in cans or in bottles.

The durable loggers enable fast and secure battery replacement and remain 100% tight after the change. The size of the logger can vary thanks to two different battery types.

The multifunction case allows the loggers to be securely stored and enables them to be read out and configured using the integrated programming and readout unit. Measurement studies can be carried out quickly and easily via the testo 191 professional software.

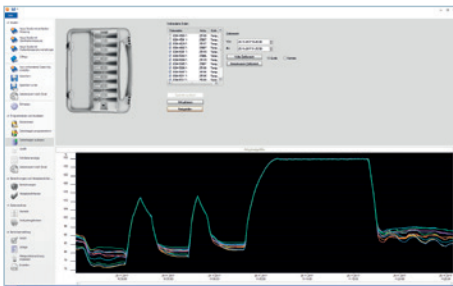
## Overview of the system components



**The HACCP data loggers** come in one pressure and four temperature models. They stand for robustness, durability and reliability. The thread means batteries can be securely changed in just a few seconds without any tools. Thanks to the logger's hermetically sealed design, it remains 100% tight even after the battery has been changed.








**The multifunction case** for the testo 191 completes the system. It is robust, smart and practical, not only providing storage for the data loggers, but also enabling configuration and readout. A programming and readout unit is installed in every case. This means that up to 8 data loggers can be configured and read out simultaneously.



**The data loggers are configured and read out using the testo 191 professional** software. And all without needing a 400-page instruction manual and complicated menus. But using guided processes, helpful data visualization and the innovative 1-click report: the report recalls the parameters of the last measurement, so that you can meet your duty to provide documentation quickly and efficiently, without needing to reset all the report parameters time and again.

## Ordering data

<p><b>testo 191-T1</b></p> <p>testo 191-T1, HACCP temperature data logger, including battery large, distance adapter long for testo 191 programming and readout unit, calibration protocol.</p>  <p>Order no. 0572 1911</p>	<p><b>testo 191-T2</b></p> <p>testo 191-T2, HACCP temperature data logger, including battery large, distance adapter long for testo 191 programming and readout unit, calibration protocol.</p>  <p>Order no. 0572 1912</p>	<p><b>testo 191-T3</b></p> <p>testo 191-T3, HACCP temperature data logger, including battery large, distance adapter long for testo 191 programming and readout unit, calibration protocol.</p>  <p>Order no. 0572 1913</p>
<p><b>testo 191-T4</b></p> <p>testo 191-T4, HACCP temperature data logger, including battery large, distance adapter short for testo 191 programming and readout unit, thread extension, calibration protocol.</p>  <p>Order no. 0572 1914</p>	<p><b>testo 191-P1</b></p> <p>testo 191-P1, HACCP pressure data logger, including battery large and calibration protocol.</p>  <p>Order no. 0572 1916</p>	

testo 191 software	Order no.	
<p><b>testo 191 professional software</b>, software for configuration and readout of testo 191 HACCP data loggers. System requirements: Windows 7 (32/64 bit), Windows 8, Windows 10.</p>	0554 1911	

testo 191 case	Order no.	
<p><b>testo 191 case small</b>, case for transport, storage, programming and readout of testo 191 HACCP data loggers, including USB cable and 1 programming and readout unit for a maximum of 8 data loggers. Provides space for 1 programming and readout unit. Dimensions: 340 x 265 x 60 mm.</p>	0516 1901	

Accessories	Order no.	
testo 191 battery small, PEEK coated. For the power supply of all testo 191 models. Application range: -20 to +140°C.	0515 1900	
testo 191 battery large, PEEK coated. For the power supply of all testo 191 models. Application range: -50 to +140°C.	0515 1901	
testo 191 can and bottle attachment, fixes the testo 191 data logger to cans or bottles.	0554 0458	
testo 191 can stand for adjusting the probe position of the testo 191 data loggers and for improving stability.	0554 1906	
testo 191 freeze-drying probe holder for more precise measurement of surface temperature with the testo 191-T3 and testo 191-T4.	0554 1907	
Retaining clamps for testo 191 loggers (pouch with 5 off).	0554 0297	
Distance adapters short to secure the testo 191-T4 data logger in the programming and readout unit.	0554 0298	
Distance adapters long to secure the testo 191-T1, testo 191-T2 and testo 191-T3 data loggers in the programming and readout unit.	0554 0299	
ISO temperature calibration certificate (testo 191-T1/-T2/-T3/-T4), calibration points -50°C; 0°C; +90°C; +121°C; +140°C	0520 0141	
DAkkS temperature calibration certificate (testo 191-T1/-T2/-T3/-T4), calibration points -50°C; 0°C; +90°C; +121°C; +140°C	0520 0281	
ISO pressure calibration certificate (testo 191-P1), calibration points 200 / 1400 / 2600 / 3800 / 5000 mbar	0520 0025	
DAkkS pressure calibration certificate (testo 191-P1), calibration points 200 / 800 / 1400 / 2000 / 2600 / 3200 / 3800 / 4400 / 5000 mbar	0520 0215	

## Technical data

HACCP data loggers	testo 191-T1	testo 191-T2	testo 191-T3	testo 191-T4	testo 191-P1
Measurement parameter / probe type	Temperature (Pt1000)				Pressure (piezo-resistive sensor)
Measuring range	-50 to +140°C				1 mbar to 4 bar abs.
Accuracy	±0.2°C (-50 to -40°C) ±0.1°C (-40 to +140°C)				± 20 mbar
Resolution	0.01°C				1 mbar
Reading memory	60,000 readings			30,000 per channel	60,000 readings
Measuring cycle	1 s to 24 h				
Storage temperature	-20 to +50°C				
<b>Dimensions</b>					
Logger with small battery	20 x 40 mm		20 x 45 mm	20 x 53 mm	22 x 64 mm
Logger with large battery	20 x 59 mm		20 x 63 mm	20 x 72 mm	22 x 83 mm
Probe shaft	3 x 25 mm	3 x 115 mm	1.5 x 775 mm		-
Probe shaft tip	-		3 x 25 mm		-
<b>Battery large (standard)</b>					
Battery type	½ AA lithium				
Service life	2,500 operating hours (measuring cycle 10 seconds at +121°C)				
Application range	-50 to +140°C				
<b>Battery small (option)</b>					
Battery type	2 x button cell lithium				
Service life	250 operating hours (measuring cycle 10 seconds at +121°C)				
Application range	-20 to +140°C				