ThermoTEC

PHARMACEUTICAL TECHNOLOGY

Cabinets and chambers –
GMP-compliant solutions for
stability & storage

www.ttwe.de

Your 360°-partner for stability testing and accelerated aging in the pharmaceutical and medical technology sectors.

In the pharmaceutical, medical, and life science industries, precisely controlled climate conditions are crucial for product quality, process safety, and regulatory compliance. ThermoTEC offers a wide range of GMP-compliant test cabinets and walk-in chambers for stability testing according to ICH guidelines and the relevant ASTM tests.

Our portfolio ranges from climate control, refrigeration, deep freezing and ultra-low temperature freezers to incubation and breeding cabinets, photostability cabinets, walk-in chambers and customer-specific special solutions - complemented by comprehensive services from a single source.

#We are more than technology.

ThermoTEC – We are more than technology.

ThermoTEC is a family-run, medium-sized company based in Weilburg (Central Hesse). For over 35 years, we have stood for reliable solutions in environmental simulation, climate testing technology, and in the pharmaceutical and biotechnology sectors. Regionally rooted and internationally networked, we support our customers as partners in demanding testing and inspection tasks.

What sets us apart is not just our technology, but above all the people behind it. Our employees contribute expertise, commitment, and responsibility, thus playing a crucial role in the shared success of our projects.

History & Development

ThermoTECWeilburg GmbH & Co. KG was founded in 1991. and remains rooted in its headquarters in Weilburg to this day. As a second-generation family-run business, we combine entrepreneurial continuity with technological advancement.

For over three decades, we have consistently expanded our product and service portfolio and invested in people. Design, infrastructure and quality. What began as a startup-like company is today a modern campus with four buildings and a three-figure number of employees.

Our growth follows clear principles: reliability, cooperative partnerships, and the commitment to continuously improve technical solutions. This attitude shapes our development—yesterday, today, and in the future.

1991

FOUNDATION

ThermoTEC Weilburg GmbH & Co. KG, managed by Dipl.-Ing. Karl-Heinz Habic

headquartered in the Kirschhofen district of Weilburg

1996

5-YEAR COMPANY ANNIVERSARY

Opening of the company building in the Weilburg-Kubach industrial park

5 employees

2011

20TH COMPANY ANNIVERSARY

Outsourcing of test center, modification workshop & warehouse

25 employees

2016

25TH COMPANY ANNIVERSARY

Opening of the new sales building

DAkkS accreditation calibration laboratory

48 employees

2021

30TH COMPANY ANNIVERSARY

Site expansion and start of construction for large multifunctional service building

75 employees

2024

NEW SERVICE BUILDING

Opening of the new multifunctional service building

DAkkS accredited testing laboratory

approx. 105 employees to date

2026

35TH COMPANY ANNIVERSARY

Expansion of our sustainability strategy

expansion of our photovoltaic system with a total output of 180 kWh

installation of a 220 kWh energy storage system.

Corporate values – the basis of our actions

At ThermoTEC, our values have shaped our thinking and actions since day one. They are firmly anchored in our corporate culture and form the basis for respectful interactions with customers, partners, and employees.

partnership
We rely on close, trusting cooperation on equal terms – both internally and externally.

reliability
You can rely on our promises. Punctuality, transparency, and responsibility are a matter of course for us.

competence & experience
With sound expertise and many years of experience, we implement projects in a solution-oriented and practical manner.

quality
The highest quality standards form the basis for long-lasting, safe and convincing results.

flexibility
Individual requirements demand individual solutions. We respond quickly, pragmatically, and with a customer-focused approach.

family life
An open, appreciative work environment with cohesion and mutual respect is central to us.

Three areas of expertise – clear solutions for demanding testing tasks

ThermoTEC operates in diverse markets and industries – each with its own specific requirements and conditions. As specialists, we develop practical, future-oriented solutions and prioritize flexibility and collaborative dialogue.

01

ENVIRONMENTAL SIMULATION

Our environmental simulation systems enable you to reliably test products in terms of function, safety, and service life. Our product portfolio ranges from temperature and climate test chambers to temperature shock and battery test systems, walk-in temperature and climate chambers, and weathering equipment.

Many of our products are available at short notice or can be rented flexibly. We implement individual adaptations on a project-specific basis, supplemented by comprehensive service from a single source.

02

PHARMATECHNIK

For the pharmaceutical and life sciences sector, we supply GMP-compliant climate, cooling, deep-freeze, ultra-deep-freeze, breeding, and incubation cabinets, as well as photostability cabinets, walk-in chambers, and customized special solutions—including planning, installation, and service.

Our solutions are suitable for stability testing in accordance with GMP and ICH guidelines and can be flexibly adapted to your processes and on-site conditions.

03

BIOTECHNOLOGY

Our plant growth cabinets, light and climate chambers and walk-in chambers enable research and production to precisely simulate controlled growth conditions.

Modern LED technology, freely configurable parameters and customer-specific equipment ensure maximum reproducibility – complemented by comprehensive service.

High-precision climate chambers for stability testing

TCS series - for stability and storage

The TCS series is ideally suited for stability storage and climate testing with high demands on temperature and humidity accuracy. The energy-optimized design with separate cooling and dehumidification registers ensures stable conditions and easy maintenance.

ThermoTEC TCS-Series

Operation with natural refrigerant - highly precise, durable and energy-efficient

Integrated screen recorder

- Actual value recording of all control and regulation circuits
- Past time ranges can be conveniently browsed through page by page
- Limited, battery-buffered monitoring in the event of a power failure

User management with login

- User management enables § 21 CFR part 11 compliant use of the climate chamber
- Complete documentation of activities, responsibilities, and execution times

logbook

- Complete real-time documentation with direct link to the recorded recorder data
- Free comments with user identification possible at any time
- Digital signature

TYPE	Test chamber volume	Temperature range	Humidity range	Internal dimensions W x H X D in mm	External dimensions W x H X D in mm
TCS-202	210 l	0 to +50 °C	20 to 95% r. h.	610 x 600 x 585	730 x 1180 x 980
TCS-352	350 l	0 to +50 °C	20 to 95% r. h.	610 x 990 x 585	730 x 1600 x 980
TCS-502	530 l	0 to +50 °C	20 to 95% r. h.	610 x 1500 x 585	730 x 2105 x 980
TCS-852	850 l	0 to +50 °C	30 to 95% r. h.	610 x 1500 x 935	730 x 2105 x 1330
TCS-1002	1060 l	0 to +50 °C	20 to 95% r. h.	610 (2x) x 1500 x 585	1460 x 2105 x 980
TCS-1702	1700 l	0 to +50 °C	30 to 95% r. h.	610 (2x) x 1500 x 935	1460 x 2105 x 1330

Temperature range:
0 °C to +50 °C

Temperature range extension:
Possible from -30 °C to +80 °C

Humidity regulation:
20% to 95% r. h.

Climate chambers for stability testing

POL-EKO climate chambers – unique price-performance ratio

POL-EKO climate chambers

in accordance with ICH guidelines and in the GxP environment

- High temperature and humidity stability
- Operation with natural refrigerant
- Energy-optimized thanks to separate cooling and dehumidification
- Compact steam humidifier
- 7" touchscreen
- Ethernet interface

Temperature range:
0 °C to +60 °C

Temperature range extension:
up to +100 °C possible

Humidity regulation:
10 % to 90 % r. h.

Prüfraumvolumen:
400 l to 1300 l

TYPE	Net volume	Temperature range	Humidity range	External dimensions W x H X D in mm
KKS 500	412	0 bis +60 °C	10 bis 90 % r. F.	640 x 1970 x 990
KKS 700	528	0 bis +60 °C	10 bis 90 % r. F.	730 x 1970 x 1110
KKS 1200	1158	0 bis +60 °C	10 bis 90 % r. F.	1460 x 1970 x 1140
KKS 1450	1326	0 bis +60 °C	10 bis 90 % r. F.	1440 x 1920 x 1240

Energy-efficient climate chambers for stability testing

HPPECO series – in accordance with ICH guidelines and in the GxP environment

HPPECO-Series

The HPPECO series was developed by Memmert specifically for energy-efficient stability testing and combines precise temperature control with modern humidification and dehumidification.

Temperature range:
0 °C bis +70 °C

Humidity regulation:
10 % to 90 % r. h.

Test chamber volume:
108 l to 2140 l

TYPE	Test chamber volume	Temperature range	Humidity range	Internal dimensions W x H X D in mm	External dimensions W x H X D in mm
HPP110eco	108 l	0 bis +70 °C	10 bis 90 % r. h.	560 x 480 x 400	745 x 864 x 555
HPP260eco	256 l	0 bis +70 °C	10 bis 90 % r. h.	640 x 800 x 500	824 x 1183 x 655
HPP410eco	384 l	0 bis +70 °C	10 bis 90 % r. h.	640 x 1200 x 500	824 x 1720 x 655
HPP750eco	749 l	0 bis +70 °C	10 bis 90 % r. h.	1040 x 1200 x 600	1224 x 1720 x 755
HPP1060eco	1060 l	0 bis +70 °C	10 bis 90 % r. h.	1040 x 1200 x 850	1224 x 1720 x 1005
HPP1400eco	1360 l	0 bis +70 °C	10 bis 80 % r. h.	1250 x 1450 x 750	1435 x 1913 x 905
HPP2200eco	2140 l	0 bis +70 °C	10 bis 80 % r. h.	1972 x 1450 x 750	2157 x 1913 x 905

Refrigerators and freezers

BioLine series—for safe pharmaceutical storage

Temperature range:
-35 °C to + 20 °C

BioLine-series

The BioLine series meets the highest requirements for temperature stability, documentation, and GMP compliance, as well as the requirements of the ICH guideline. The refrigerators and freezers in the GRAM BioLine series are characterized by optimal cooling performance and high reliability.

- Precise temperature control & uniform distribution
- Integrated control with temperature recording
- ATEX certification allows use in Category 3 / Zone 2, where explosive atmospheres may occur
- Natural refrigerant and low energy consumption

Refrigerators from the BioLine series

TYPE	Gross volume	Net volume	Temperature range	External dimensions W x H X D in mm
RR210	125 l	105 l	+2 bis +20 °C	595 x 1001 x 640
RR310	218 l	189 l	+2 bis +20 °C	595 x 1390 x 640
RR410	346 l	312 l	+2 bis +20 °C	595 x 1976 x 640
ER500	500 l	365 l	-2 bis +20 °C	600 x 2275 x 805
ER600D	600 l	432 l	-2 bis +20 °C	695 x 2125 x 876
ER600W	600 l	432 l	-2 bis +20 °C	815 x 2125 x 756
ER660D	660 l	484 l	-2 bis +20 °C	695 x 2275 x 876
ER660W	660 l	484 l	-2 bis +20 °C	815 x 2275 x 756
ER930	930 l	702 l	-2 bis +20 °C	780 x 2275 x 1045
ER1270	1270 l	864 l	-2 bis +20 °C	1390 x 2125 x 876
ER1400	1400 l	968 l	-2 bis +20 °C	1390 x 2275 x 876

Freezers from the BioLine series

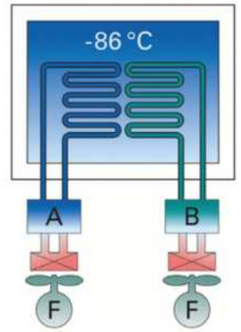
TYPE	Gross volume	Net volume	Temperature range	External dimensions W x H X D in mm
RF210	125 l	104 l	-25 bis -5 °C	595 x 1001 x 640
RF310	218 l	189 l	-25 bis -5 °C	595 x 1390 x 640
RF410	346 l	312 l	-25 bis -5 °C	595 x 1976 x 640
RF500	500 l	365 l	-25 bis -5 °C	600 x 2275 x 805
RF600D	600 l	432 l	-25 bis -5 °C	695 x 2125 x 876
RF600W	600 l	432 l	-25 bis -5 °C	815 x 2125 x 756
RF660D	660 l	484 l	-25 bis -5 °C	695 x 2275 x 876
RF660W	660 l	484 l	-25 bis -5 °C	815 x 2275 x 756
RF930	930 l	702 l	-25 bis -5 °C	780 x 2275 x 1045
RF1270	1270 l	864 l	-25 bis -5 °C	1390 x 2125 x 876
RF1400	1400 l	968 l	-25 bis -5 °C	1390 x 2275 x 876
EF600W	600 l	432 l	-35 bis -5 °C	837 x 2125 x 756
EF660W	660 l	484 l	-35 bis -5 °C	837 x 2275 x 756

Ultra-deep freezers

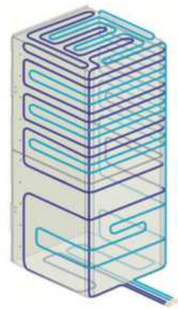
TwinGuard ECO series – maximum safety at -86 °C

Highest SAFETY for your samples

DUAL COOLING CIRCULATION



DUAL COOLING SYSTEM



TwinGuard ECO series

For the ultra-cold long-term storage of sensitive samples, the Twinguard series offers maximum reliability.

- Dual cooling system with two independent cooling systems
- Temperature maintained at approx. -75 °C even if one system fails
- High storage capacity with excellent temperature stability
- Complies with ICH guidelines and GMP requirements
- The new generation of TwinGuard ultra-low temperature freezers use natural refrigerants and inverter-controlled compressors, reducing energy consumption by up to 50% compared to the previous model.

TYPE	Test chamber volume	Temperature range	Internal dimensions W x H X D in mm	External dimensions W x H X D in mm
MDF-DU303VXH-PE	360 l	-86 bis -40 °C	490 x 1230 x 600	670 x 1838 x 882
MDF-DU503VXH-PE	528 l	-86 bis -40 °C	670 x 1400 x 600	790 x 1988 x 882
MDF-DU703VXH-PE	729 l	-86 bis -40 °C	870 x 1400 x 600	1030 x 1988 x 882

Heating cabinets

UF series – versatile and precise

UF-Series

Memmert heating cabinets are suitable for a wide range of applications in research, laboratories, and industry.

- Test chamber volume: 32 l to 1060 l
- Forced air circulation
- Precise control of air exchange and temperature
- Temperature ramps on models with TwinDISPLAY can be conveniently programmed using the AtmoCONTROL software
- Air exchange rates and air damper position in the universal cabinet can be controlled electronically

UF series with forced circulation

TYPE	Test chamber volume	Temperature range	Internal dimensions W x H X D in mm	External dimensions W x H X D in mm
UF-30	32 l	RT +10 bis +300 °C	400 x 320 x 250	585 x 704 x 434
UF-55	53 l	RT +10 bis +300 °C	400 x 400 x 330	585 x 784 x 514
UF-75	74 l	RT +10 bis +300 °C	400 x 560 x 330	585 x 944 x 514
UF-110	108 l	RT +10 bis +300 °C	560 x 480 x 400	745 x 864 x 584
UF-160	161 l	RT +10 bis +300 °C	560 x 720 x 400	745 x 1104 x 584
UF-260	256 l	RT +10 bis +300 °C	640 x 800 x 500	824 x 1183 x 684
UF-450	449 l	RT +10 bis +300 °C	1040 x 720 x 600	1224 x 1247 x 784
UF-750	749 l	RT +10 bis +300 °C	1040 x 1200 x 600	1224 x 1720 x 784
UF-1060	1060 l	RT +10 bis +300 °C	1040 x 1200 x 850	1224 x 1726 x 1035

Photostability cabinets

ICH-L series - standard-compliant photostability tests tests

ICH-L-series

The climate chambers for photostability testing in accordance with Q1B from the manufacturer Memmert with compressor cooling are characterized by unique homogeneity of temperature and humidity for long-term stable environmental conditions. The ICH-L series meets the requirements of the ICH Guideline for photostability and long-term stability.

- Cooling with natural refrigerant (R290, propane)
- Two illuminated levels
- Lighting unit consisting of four fluorescent lamps with cool white light (standard light type D65 6,500 K) and two UV lamps with a spectral range of 315 to 400 nm, light intensity approx. 8,000 lux
- Optional with CO_2 control

Temperature range:
+10 °C to +60 °C

Humidity regulation:
10 % to 80 % relative humidity

TYPE	Test chamber volume	Temperature range	Humidity range	Internal dimensions W x H X D in mm	External dimensions W x H X D in mm
ICH110Leco	108 l	+10 bis +60 °C	10 bis 80 % r. h.	560 x 480 x 400	745 x 1233 x 585
ICH260Leco	256 l	+10 bis +60 °C	10 bis 80 % r. h.	640 x 800 x 500	824 x 1552 x 685
ICH750Leco	749 l	+10 bis +60 °C	10 bis 80 % r. h.	1040 x 1200 x 600	1224 x 1950 x 785

Custom-designed climate chambers

When standard solutions are not sufficient, we develop customer-specific climate chambers –

precisely tailored to your structural conditions, test volumes, and processes. ThermoTEC climate chambers in special designs were specifically conceived for stability testing in accordance with GMP. These are optimally suited for storage under all current climates
of the ICH guideline.

Customized solutions tailored to your on-site requirements.

- Modular system
- Available as climate, cooling, deep-freeze, or incubator cabinets
- Very homogeneous temperature and humidity distribution
- Intelligent control and regulation systems
- Redundant climate control, control, and regulation technology
- Standard temperature range for climate cabinets: +20 to +42 °C (extension optional)
- Standard humidity range for climate chambers: 55 to 80% RH (extension optional)
- Refrigerators: +2 to +8 °C
- Freezers: -15 to -40 °C
- Incubators: +20 to +60 °C

Room-within-a-room solutions

GMP-compliant walk-in Chamber concepts

GMP-compliant walk-in chamber concepts

Tailor-made stability and storage solutions

ThermoTEC develops walk-in climate, refrigeration, and deep-freeze chambers as well as incubation chambers for applications in pharmaceuticals, medical technology, and laboratory environments.

Our room-in-room solutions are specially designed for stability studies in accordance with ICH Guideline Q1A and relevant ASTM standards and meet the highest requirements for process reliability and documentation.

From compact chamber solutions to large-volume storage systems, we customize each system to your structural conditions, capacity requirements, and regulatory framework.

Technical precision and regulatory safety

Our systems are characterized by:

- Highly uniform temperature and humidity distribution
- Energy-efficient air conditioning and refrigeration technology
- Intelligent control systems with user and alarm management
- GAMP-compliant hardware and software concepts
- Design in accordance with FDA 21 CFR Part 11

Standard areas (extension optional):

- Climate chambers: +20 °C to +42 °C / 55–80% relative humidity
- Cold rooms: +2 °C to +8 °C
- Freezer rooms: -40 °C to -10 °C

Optional redundancy concepts, automatic switchovers, and sophisticated dehumidification and defrosting solutions ensure maximum operational reliability.

From planning to long-term support

ThermoTEC supports your project from the initial concept to the qualified handover:

- Project management and layout planning
- Commissioning and user training
- Calibration and qualification
- Maintenance and 24/7 service

Thanks to our in-house engineering and modification expertise, we create solutions that integrate seamlessly into your infrastructure and offer long-term investment security.

Equipment options

Stand shelving systems

Jestrabek's shelving systems have been used for many years to the utmost satisfaction of customers in walk-in chambers and climate-controlled cabinets in special designs.

Various shelf lengths between 600 and 1200 mm in fine increments allow for optimal use of space. Intermediate sizes are also possible. The materials available are aluminum, natural anodized and stainless steel. All shelves are free-standing – wall mounting is not necessary.

- Individual adaptation to the spatial conditions
- Insert grids instead of closed bases for very homogeneous air distribution
- Made of aluminum and stainless steel
- Assembly using a plug-in system – no screws required
- Very high stability
- Version with perforated plates available on request

Rolling shelf systems

Bruynzeel archiving systems are used wherever particularly high storage capacities are required. The rails are integrated into an aluminum platform. The aluminum floor is antistatic and dust- and emission-free. The platform height is only 40 to 50 mm above the existing floor. A baseboard is used to create a closed finish.

A 250 mm wide, extra-flat access ramp improves access to the system.

The drive system enables the user to move loads of up to 25,000 kg with a force of approximately 10 kg via the ergonomically shaped aluminum handwheel.

Thanks to the three-spoke design, an optimal starting position can always be selected and the system can be operated from different positions.

- Optimal use of space
- Individual, customer-specific planning adapted to product sizes
- Easy handling thanks to special drive
- Running rails are integrated into an aluminum platform, hygienic and trip-free

Measurement data acquisition

Yokogawa Monitoring-System GM

The Yokogawa GM data acquisition unit is a scalable, powerful data logging system for demanding measurement tasks. The system can be operated both PC-based and autonomously and is ideal for test benches, climate chambers, and complex measurement setups.

Measurement data is stored locally on an SD card or integrated into your network via an Ethernet interface. Real-time trend display allows immediate evaluation of test sequences. By connecting to the MCPS software, the systems can be seamlessly integrated into existing testing and monitoring concepts.

With up to 10 input/output modules (equivalent to up to 100 channels), the Yokogawa GM system offers maximum flexibility for growing measurement requirements.

Special features

- Scalable modular system with up to 100 channels
- Supports DC voltage, thermocouples, resistance thermometers and contact inputs
- Modular expandability for growing requirements
- Web-based configuration and real-time display
- High measurement accuracy and reliable data storage
- Network-compatible and ideal for integrated system solutions
- Compatible with MCPS for central data evaluation

MCPS data acquisition software

MCPS is a powerful software for recording, storing, and evaluating measurement data—intuitive to use, flexibly scalable, and reliable in operation.

It can be installed on standard PCs and configured without any programming knowledge. Measurement tasks are created using structured projects, which serve as a central unit for data acquisition, display and evaluation.

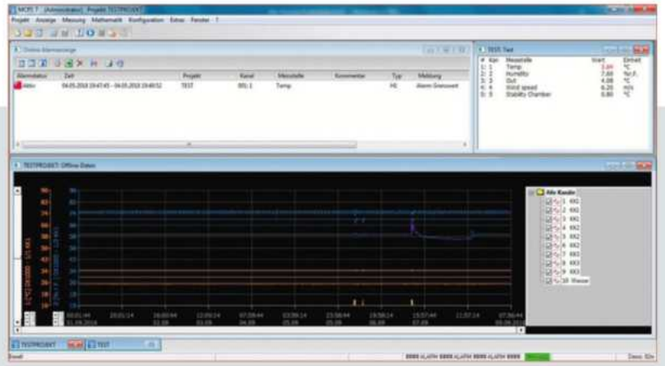
MCPS can be used across all industries – from individual test benches to complex monitoring systems. In regulated areas, the software meets the requirements of FDA 21 CFR Part 11 and enables traceable documentation of measurement and test data.

Measurements can be visualized graphically and evaluated in tabular form—clearly and comprehensibly.

Special features

- Intuitive project structure
- Simultaneous execution of multiple measurements
- Flexible group and user management
- Modular system, only necessary functions
- Standard-compliant documentation
- Graphical and tabular evaluation
- Secure data storage

With MCPS, measured values can be conveniently recorded and clearly visualized both graphically and documented in tabular form.



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003	KK1	KK1	0	01.09.2016 00:01:44	0,01	1,00	06.09.2016 07:15:34	0,01	Tür
004	KK2	KK2	29.80	01.09.2016 01:01:44	29.88	30.20	07.09.2016 10:56:44	29.88	°C
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010	Wasser	Leitwert Leckage	0	01.09.2016 00:01:44	0	0	01.09.2016 00:01:44	0	Wasser

Storage and rental equipment

ThermoTEC offers regularly tested used equipment for sale or rent at attractive conditions. A wide selection of climate test chambers and temperature shock chambers for various testing requirements is available. Thanks to our stock inventory, many models are available at short notice and can be tested without obligation.
Numerous devices are also available for flexible rental – individually or as part of fixed rental models. This allows you to quickly find the right solution and then decide whether you want to continue renting the test chamber or purchase it.

- Stock, rental, and used equipment
- Climate test and temperature shock chambers available at short notice on favorable terms
- Rental and purchase options for different requirements
- Systems available for delivery at short notice
- Flexible use for test, rental, or purchase projects

Accredited testing laboratory

Especially for accelerated aging tests

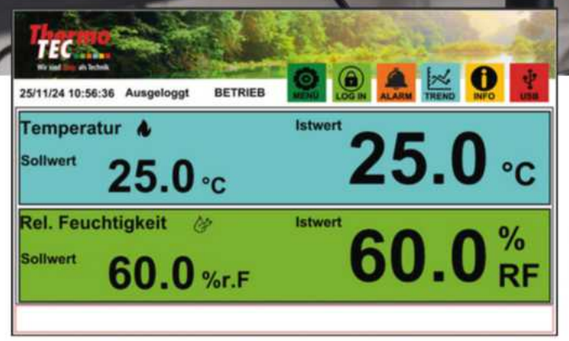
At our site in Weilburg, we operate a testing laboratory accredited according to ISO/IEC 17025. This enables us to test products under accredited conditions – flexibly and reliably to bridge capacity bottlenecks.
You benefit from consistently calibrated and qualified equipment as well as our many years of experience in the pharmaceutical industry, taking into account the high requirements of GMP.

Climate cabinets up to 1,750 l

3 walk-in climate chambers
up to 70 m^3 volume

Climate conditions compliant with ICH
Special climates possible

Your path to a tailor-made solution



Intuitive control of the devices through a clear user interface

Creation of circuit diagrams, electrical design and programming

One partner for all services:

In-house implementation of electrical design, visualization, and programming.

From requirement to solution

ThermoTEC provides electrical design, visualization, and programming services from a single source. All services are developed and implemented in-house—without interface losses and with optimally coordinated processes. This results in customized solutions that are precisely tailored to your technical requirements, operational processes, and regulatory specifications.

From the initial inquiry to long-term support, we accompany you in a structured, transparent, and reliable manner. Each project step is clearly defined and seamlessly interlinked – for maximum planning reliability, technical precision, and sustainable investment security.

After analysis and project planning, we proceed with the implementation of your system, including commissioning and fine-tuning. Subsequently, qualification and performance measurement ensure compliance with all specifications. With handover, training, and complete documentation, our service offering is complete. Subsequently, qualification and performance measurement ensure that all specifications are met. With handover, training, and complete documentation, our range of services for you does not end there: maintenance, calibration, and requalification ensure long-term system availability and process stability.

01 REQUEST/ TENDER

- Definition of requirements / specifications
- Implementation period and quotation preparation

02 PROJECT PLANNING

- Design of the system/ Cell
- Creation of plans, E-design, Programming
- Creation of the timeline

03 IMPLEMENTATION

- Cell assembly
- Technical assembly
- Commissioning and adjustment

04 QUALIFICATION & PERFORMANCE MEASUREMENT

- Conducting customer-specific qualifications or performance tests
- Evaluation of measurement results

05 HANDOVER OF THE SYSTEM

- Instruction and user training
- Handover of system documentation

06 MAINTENANCE, CALIBRATION & REQUALIFICATION

Qualification and calibrations

Qualifications

Trained ThermoTEC service technicians perform risk analyses, design qualification (DQ), installation qualification (IQ), operational qualification (OQ), and performance qualification (PQ). The temperature and humidity distribution measurements required for OQ and PQ are performed with 15 or more sensors in both unloaded and loaded conditions over 6, 12, or 24 hours.
15 or more sensors in both unloaded and loaded conditions over 6, 12, or 24 hours. Calibration is performed according to the comparison measurement principle and is confirmed by a protocol. The measuring equipment used for calibration is calibrated regularly and is traceable to the national standards of the Physikalisch-Technische Bundesanstalt (PTB) in Germany or to other national standards.
In addition, a door-open test can be performed to simulate and verify the behavior of the temperature and relative humidity in the chambers when the door is opened.

The temperature/humidity curve and the times are documented. The door-open test is successful if the temperature and humidity limits are restored within one hour after the door is closed.
This is followed by a "power fail test" and a "recovery test." Here, the system is disconnected from the power supply to obtain information about the behavior of the chamber in the event of a power failure.
The power supply to the system is interrupted via the main switch or the power supply line. The measurement continues until a sensor has left the acceptance criterion, but for no longer than three hours.

Qualification is carried out in accordance with the ThermoTEC qualification plan. Details can be adjusted in accordance with the available SOPs.

DAkkS
Deutsche Akkreditierungsstelle

Akkreditierung

Die Deutsche Akkreditierungsstelle bestätigt mit dieser **Akkreditierungsurkunde**, dass das Kalibrierlaboratorium

ThermoTEC Weilburg GmbH & Co. KG
Friedenbachstraße 18, 35781 Weilburg

die Anforderungen gemäß DIN EN ISO/IEC 17025:2018 für die in der Anlage zu dieser Urkunde aufgeführten Konformitätsbewertungstätigkeiten erfüllt. Dies schließt zusätzliche bestehende gesetzliche und normative Anforderungen an das Kalibrierlaboratorium ein, einschließlich solcher in relevanten sektoralen Programmen, sofern diese in der Anlage zu dieser Urkunde ausdrücklich bestätigt werden.

Die Anforderungen an das Managementsystem in der DIN EN ISO/IEC 17025 sind in einer für Kalibrierlaboratorien relevanten Sprache verfasst und stehen insgesamt in Übereinstimmung mit den Prinzipien der DIN EN ISO 9001.

Diese Akkreditierung wurde gemäß Art. 5 Abs. 1 Satz 2 VO (EG) 765/2008, nach Durchführung eines Akkreditierungsverfahrens unter Beachtung der Mindestanforderungen der DIN EN ISO/IEC 17011 und auf Grundlage einer Bewertung und Entscheidung durch den eingesetzten Akkreditierungsausschuss ausgestellt.

Diese Akkreditierungsurkunde gilt nur in Verbindung mit dem Bescheid vom 20.03.2024 mit der Akkreditierungsnummer D-K-19243-01.
Sie besteht aus diesem Deckblatt, der Rückseite des Deckblatts und der folgenden Anlage mit insgesamt 5 Seiten.

Registrierungsnummer der Akkreditierungsurkunde: **D-K-19243-01-00**

Berlin, 20.03.2024 Im Auftrag Dipl.-Wirtsch.-Ing. (BA) Tim Hamisch
Fachbereichsleitung

Calibrations

The calibration laboratory of ThermoTEC Weilburg GmbH & Co. KG has been accredited by the German Accreditation Body (DAkkS) in accordance with DIN EN ISO IEC 17025 for the measurement variables of temperature and humidity as well as for on-site calibrations since 2015.
To ensure the accuracy and validity of test results, measuring and testing equipment as well as test facilities must be calibrated regularly. Our ISO 17025-accredited calibration procedures provide you with reliable and traceable measurement results for your measuring and testing equipment.
State-of-the-art reference devices and equipment for temperature and climate generation ensure the lowest possible measurement uncertainties.

Thermo TEC
We sind mehr als Technik.

ThermoTEC Weilburg GmbH & Co. KG
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Mail: info@twe.de • Internet: www.twe.de

Werkskalibrierzertifikat
Calibration Certificate

Zertifikats-Nr.:

ZERTIFIKAT - CERTIFICATE - CERTIFICADO - CERTIFICAT

ZERTIFIKAT

Zertifikat-Registrier-Nr.: 001 20 6234

Die Zertifizierungsstelle der
TÜV SÜD AMERICA INC.

bescheinigt, dass die Organisation

Thermo TEC
We sind mehr als Technik.

THERMOTEC Weilburg GmbH & Co.KG
Friedenbachstr. 18
35781 Weilburg, HE Deutschland

für den Geltungsbereich

Vertrieb und Service von Geräten zur Umweltsimulation, Kalibrier- und Prüfdienstleistungen

ein Qualitätsmanagementsystem eingeführt hat und anwendet.
Durch ein Audit wurde der Nachweis erbracht, dass die Forderungen der

ISO 9001:2015

erfüllt sind.

Dieses Zertifikat ist gültig vom 11. Juni 2025 bis 10. April 2028 mit dem Neuausgabedatum am n.z.

Michael Cornish
Head of Central Certification Body

TÜV SÜD America Inc. • 401 Edgewater Place, Suite 500 • Wakefield, MA 01880 USA • www.TUVSUD.com
The validity of this certificate is contingent on the company maintaining its management system in the requirements of the indicated standard and is subject to regular monitoring by TÜV SÜD America Inc.

TÜV®

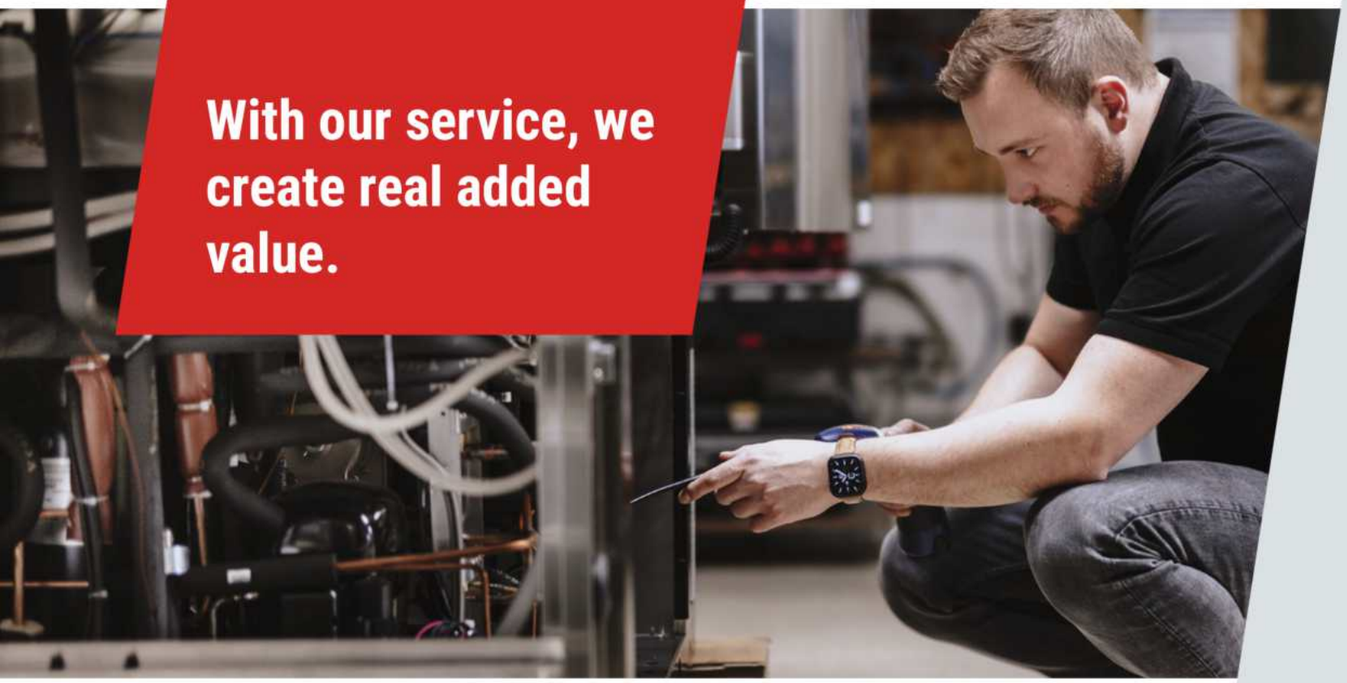
Our services

- Accredited for the measured variables temperature and humidity
- Calibration of temperature and climate chambers in accordance with guideline DAkkS-DKD-R 5-7 on site using methods A, B, and C
- Calibration of direct-reading temperature and humidity measuring devices in a calibration laboratory accredited according to ISO 17025
- Receipt of a DAkkS calibration certificate

Maintenance

- Periodic functional and safety inspections of your equipment to maintain value and ensure economical operation.

With our service, we create real added value.



Our strength lies in technology, but we create real added value with our personal service. Since our founding, a high-performance, comprehensive service has been firmly anchored at the core of ThermoTEC. Furthermore, we place great emphasis on expertise and quality in advising our customers, from delivery to after-sales service.

Our services for you

installation and commissioning

- Support with device installation
- Connection to the on-site media

calibration

- Temperature and humidity according to ISO 17025, including certificate

maintenance

- Mechanical inspection
- Air conditioning and refrigeration inspection
- Inspection of safety devices
- Electrical inspection
- Inspection of measurement and control systems

qualification

- Installation Qualification
- Operation Qualification
- Performance Qualification
- Power-on test
- Power failure and recovery test
- Spatial distribution measurement

product training

- Introduction to how the devices work
- Operation and programming of the control system

user training

- In device operation and to improve expertise in climate testing technology

technical support & service

- Strong team for industry-compliant service
- 24- or 48-hour emergency service

check-up

- Function test
- Visual inspection
- Inspection of wear parts
- Documentation via check-up report

leak test

- Leak test by certified specialists
- Use of an electronic leak detector
- Inspection of the entire system for leaks

distribution measurement

- Distribution measurements (“mappings”) over a defined measurement period
- Recording of all relevant measurement data
- Evaluation and documentation in validated protocols

DGUV inspection

- Inspection in accordance with DGUV Regulation 3
- Carried out by a qualified electrician
- Documentation of the inspection in an inspection report

Comprehensive service network

Our service center with an extensive spare parts warehouse is centrally located in Weilburg in the middle of Germany. From here, and with our service technicians stationed throughout Germany, we guarantee short distances, fast response times, and maximum operational readiness.

When it comes to service, you benefit from reliable support, fast availability of spare parts, and smooth processing.

Our service support is available during regular business hours, as well as on weekends and holidays. Upon request, we also offer a 24-hour service for maximum operational reliability.

Our service support is available during regular business hours as well as on weekends and holidays. Upon request, we also offer a 24-hour service for maximum operational reliability.

24 h Service

Always close to you.

01

PRODUCT

Consulting, testing solutions, suitable equipment, flexible rental models, and equipment available from stock at short notice.

02

PROZESS

Transparent processes, timely implementation, and customized modifications carried out in our own Engineering & Modification department.

360° PARTNER

03

QUALITY

ISO 9001 certified and accredited testing and calibration laboratory according to ISO/IEC 17025.

04

SERVICE

Comprehensive service network, manufacturer-independent, and available 24/7.

05

SUPPORT

Direct support through experienced service technicians and practical training.

Our 360°-service

Comprehensive solutions throughout the entire life cycle

ThermoTEC supports you from the initial idea through commissioning to after-sales service. Our comprehensive 360° approach reliably covers all phases and ensures maximum efficiency and operational reliability.

Since our founding, high-performance, comprehensive service has been at the heart of everything we do. We combine expertise, quality, and personalized advice—from planning and delivery to long-term support.

With ThermoTEC, you get more than just equipment: you gain a reliable partner for sustainable process reliability.

OUR LOCATIONS

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SALES
- Sales from a single source
- Project management
- Corporate development
- Marketing

ADMINISTRATION
- Administration
- Human resources
- Accounting
- IT
- Accredited calibration laboratory

SERVICE
- Your 360° partner for service
- Engineering & Modification
- Accredited testing laboratory
- Efficient spare parts management
- Logistics
- Additional warehouse for just-in-time deliveries
- Materials management and fleet management

WAREHOUSE & EXPANDED TESTING LABORATORY
- For just-in-time deliveries
- Several walk-in climate chambers up to 70m³

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Subject to technical changes and errors excepted. / 03.2026