Maximum reliability. For pharmacies and customers.

LIEBHERR

SmartMonitoring

Focusing more on people. Thanks to digitalisation.

Pharmacies have a clear focus: people. All the work performed at pharmacies revolves around people and their well-being. This is exactly where their strengths and future potential lie, because pharmacies are not only the first place people go for medication, they are also the first port of call for expert and personal advice.

For years, studies have proven that customers prefer to stay loyal to their local pharmacy despite the growth in online services.* They feel well informed here and receive clear explanations. Particularly for health-related questions, nothing can match personal customer consultations. However, there is increasingly less time available for these. And the expectations of pharmacies on the part of customers and government regulations are growing.

The demands are high.

While pharmacies often suffer chronic staff shortages, their range of services is constantly expanding and the challenges they face during everyday work are becoming increasingly complex. This also includes demands on the proper storage of substances that must be chilled. Cooled medications must be monitored every minute, temperature profiles recorded and the storage conditions constantly checked. Pharmacy work regulations stipulate that storage temperatures must be rule, checked and documented. This is a task that requires a significant amount of time.

Digitisation creates the additional time.

The increasing digitalisation of pharmacies creates time where it is in short supply. Measuring devices, sensors, processes, databases and dashboards are networked with each other, exchange and evaluate data, document it and independently derive necessary measures from it. Pharmacy staff can concentrate on value-adding tasks. There is also a digital solution especially for the reliable monitoring of temperature and storage conditions and their complete documentation, which leaves more time and freedom for the actual work: SmartMonitoring from Liebherr.

Complex and time-consuming tasks that can be digitally mastered in pharmacies:

- Ensuring constant and precise cooling of temperature-sensitive substances
- Reliable monitoring of temperatures and storage conditions
- Continuous documentation and evaluation of all relevant data

*see current https://www.aponet.de/artikel/drei-von-vier-deutschen-schaetzen-ihre-apotheke-vor-ort-24967

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The challenges of storing temperature-sensitive medications in pharmacies.

Problem 1:
Time-consuming documentation

A familiar and much unloved task: documentation in the daily work at pharmacies. Every temperature change of cooled medications must be transparently documented, to comply with pharmacy work regulations and to ensure that the medications can be used. Complete manual documentation is difficult to achieve in addition to regular pharmacy work. In addition to losing data and information that could be important in the future or be required as part of the obligation to provide complete documentation, productive work time is also lost. However, pharmacy staff prefer to conduct these tasks themselves instead of delegating them to a digital solution. This is due to reservations about training staff to use a digital monitoring system and doubts about its reliability.

Problem 2:
Storage temperature fluctuations

In many pharmacies, the cooling of sensitive substances is a recurring and problematic issue. Reliable cooling ensures a precise, constant temperature and creates the ideal conditions for each type of medication. After all, temperature deviations can have far-reaching consequences: Essential medications can perish and their efficacy be impaired. As soon as fridges and freezers come into play, the fear of unnoticed temperature deviations is therefore always present.

Problem 3:
A lack of alarms in the event of deviations

If the storage of chilled medications does not run smoothly, often pharmacy staff only detect this when it is already too late. The storage temperature is too high or too low for too low and the medication is now unusable. A lack of early warning systems, which trigger alarms as soon as the data changes in an unexpected way, is responsible for this. Some pharmacies do have warning systems, however they often only trigger alarms on-site. This means that no one is prompted to respond immediately after hours or at the weekend. And the next working day staff arrive to an unpleasant surprise.

Daily challenges for pharmacy staff regarding the storage medications that must be chilled:

- **Complete documentation** of temperatures and storage conditions during regular work hours is difficult to achieve
- **No free time**, for training staff to use monitoring systems
- Constant concerns about **unnoticed temperature deviations** which pose high risks for customers
- Unusable medications due to a **lack of alarm systems** in the event of deviations

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The most efficient solution for the safe storage of medications: digitalisation.

Solution 1:
Establishing reliable alarm systems

If nobody is in the pharmacy, nobody will notice an alarm, if it is triggered at all. This is because the storage conditions are often still manually checked at regular intervals. If an error occurs between these checks, it often remains unnoticed for too long. Fixed opening and working times mean that pharmacies are not occupied at all times. The solution: Alarm systems which monitor fridges at all times and transmit warning messages to ensure fast response times.

Solution 2:
Evaluating potential declines in quality

If an incident has occurred and the temperature has already risen or fallen too sharply, the alarm list helps to make a decision about which procedure to follow next. With each alarm, it documents the minimum and maximum values reached as well as the duration of the alarm. Have the stored medications reached a critical value or can they still be used and sold? The alarm list provides information on this.

Solution 3:
Always keep an eye on everything

A digital solution can be used for multiple sites and enables a quick overview of several pharmacies. All relevant data from the various locations is bundled together and an overview is displayed on a dashboard. All critical parameters are also always accessible.

Solution 4:
Defining individual thresholds for pre-warning levels

It can be useful to define individual thresholds for highly-sensitive substances, that must not be exceeded or fallen below at any time. A cloud alarm triggers a warning when this threshold has been reached – even before the appliance alarm is triggered. This pre-warning level can be additionally set for particularly sensitive medication, for example, and can sometimes be decisive for its effect.

Services of a digital solution for the safe and efficient storage of medications:

- Reliable alarm that can prompt an immediate response any time, anywhere
- Alarm list, which enables the data-driven evaluation of the damage that occurred during an alarm
- All relevant data at a glance, also from different sites
- Pre-warning level via cloud alarm with individually definable temperature thresholds

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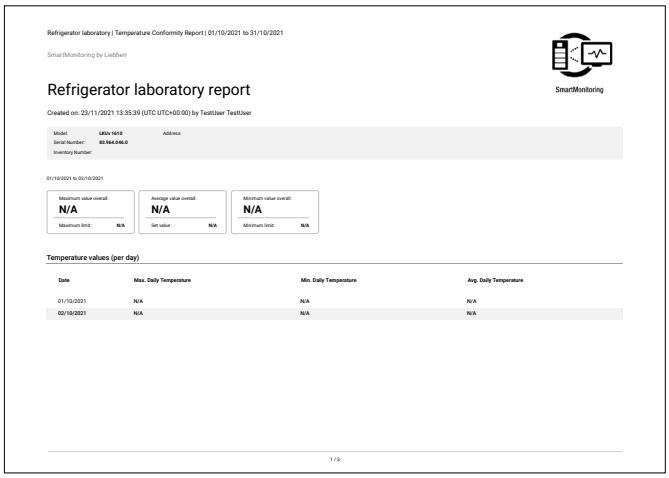
Maximum reliability with SmartMonitoring.

Liebherr’s SmartMonitoring is an ultra-modern system that brings increased reliability into every pharmacy. The digital monitoring solution provides staff with more time to concentrate on their most important tasks.


Refrigerator laboratory | Temperature Conformity Report | 01/10/2021 to 31/10/2021

SmartMonitoring by Liebherr

Refrigerator laboratory report

SmartMonitoring

Created on: 23/11/2021 13:35:39 (UTC UTC+00:00) by TestUser TestUser

Model: UKUv 1610
Serial Number: 83.964.046.0
Inventory Number:
Address:

01/10/2021 to 02/10/2021

Maximum value overall: N/A
Maximum limit: N/A

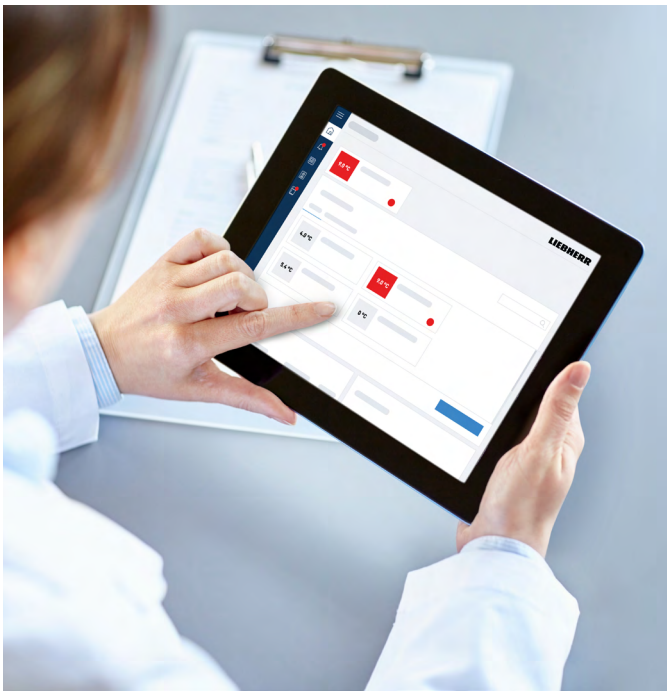
Average value overall: N/A
Set value: N/A

Minimum value overall: N/A
Minimum limit: N/A

Temperature values (per day)

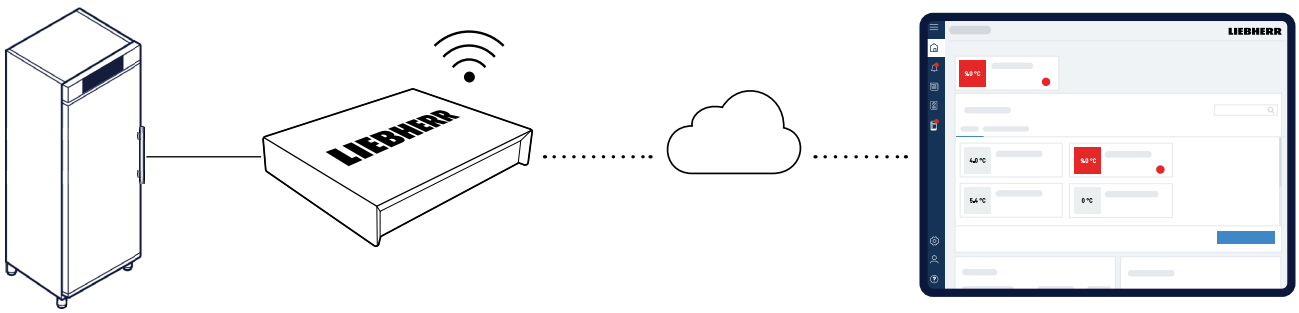
Date	Max. Daily Temperature	Min. Daily Temperature	Avg. Daily Temperature
01/10/2021	N/A	N/A	N/A
02/10/2021	N/A	N/A	N/A

1 / 3



The fridges are networked with the organisation’s internal network and the Liebherr dashboard via a SmartCoolingHub. The system automatically gathers operational data, alarm messages and appliance statuses, then saves and processes it. A clearly arranged, web-based dashboard displays messages and data reliably, enabling manual monitoring as well. Evaluations and reports are available at all times. Reliable alarm systems warn immediately by email and, if required, also by voice call and SMS. And best of all: Despite its extensive features, SmartMonitoring is intuitive and easy to use.

So that pharmacy staff can concentrate on what customers value the most: personal consultations.



Connectible
fridge/freezer

SmartCoolingHub
Collection of data and communication with cloud services

SmartMonitoring Cloud
Processing and visualisation of all data

SmartMonitoring Dashboard
All your data at a glance

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