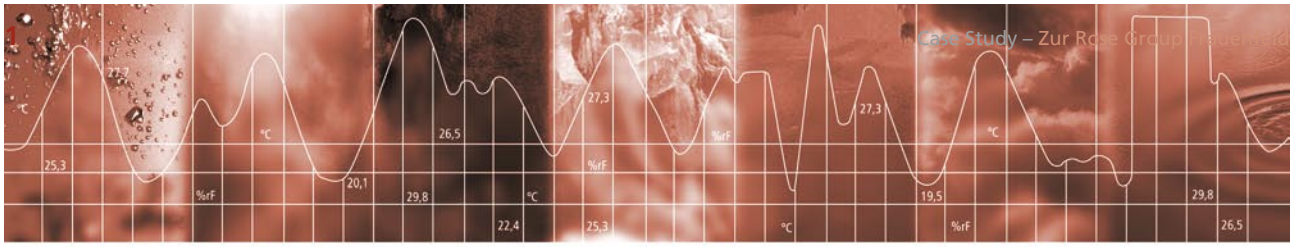

ELPRO CASE STUDY

Zur Rose group in Frauenfeld

Comprehensive service – from one source

In order to guarantee and document quality, a qualification of the storage facilities (temperature mapping) was performed at the company Zur Rose in Frauenfeld. The results of this analysis were used as the basis for developping of a central monitoring system to provide continuous recording and monitoring of climatic conditions.

In the process, Zur Rose profited from the comprehensive service offered by ELPRO: As system supplier, in addition to installing and commissioning the monitoring system, ELPRO was also in a position to perform the IQ/OQ and carry out in user training.

The project partner

zur Rose

The Zur Rose Group is a group of companies, located in one site, which represents the interests of doctors. The group includes a medical wholesaler specialized in supplying the doctor's surgery and the Zur Rose mail-order pharmacy which, in collaboration with doctors, dispatches competitively priced pharmaceuticals.

Zur Rose has achieved a market leading position within the pharmaceutical industry as key supplier for doctor‘s surgeries. In addition, with the mail-order pharmacy business Zur Rose has been able to further increase its efficiency in the healthcare market

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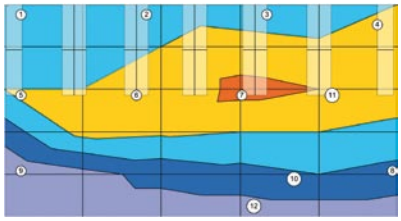
The project



Temperature mapping – recording the spatial temperature distribution

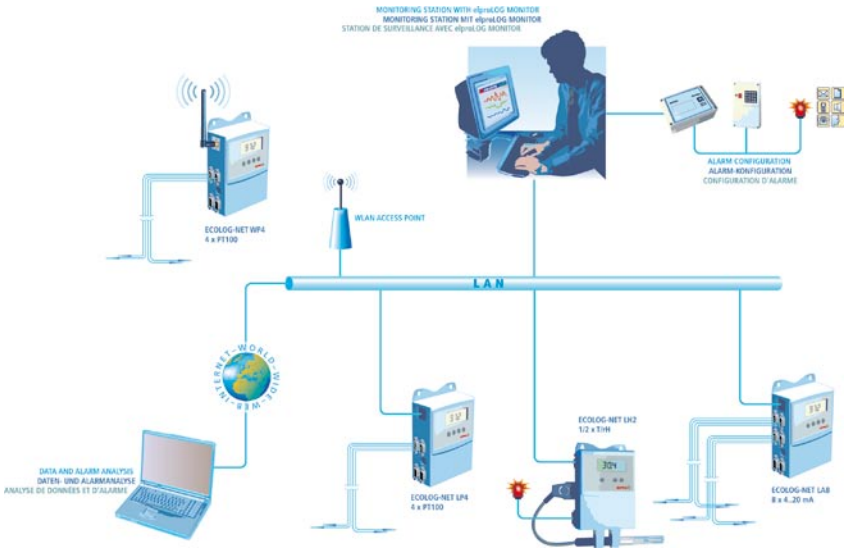
Recording climatic conditions and analyzing temperature distribution are central aspects of evaluating the quality of storage environments. Among other things, the following questions are answered during temperature mapping studies:

- How big are the temperature fluctuations at various locations in a large storage room?
- What are temperatures like in winter and how high is the storage temperature on a hot summer day?
- Is the climatization of the room sufficient to guarantee compliance with the regulations regarding storing temperature and humidity-sensitive commodities?

Using ELPRO know-how

Zur Rose contracted ELPRO to perform a temperature mapping in order to record and analyze the distribution of temperature inside cold storage cells and storage rooms.
ELPRO provided a comprehensive service, from the initial concept, evaluation of the results and through to the creation of documentation observing GLP/GMP compliance. This documentation was used by Zur Rose, among other things, to provide evidence of storage quality to SwissMedic, the Swiss Agency for Therapeutic Products.

Central Monitoring System



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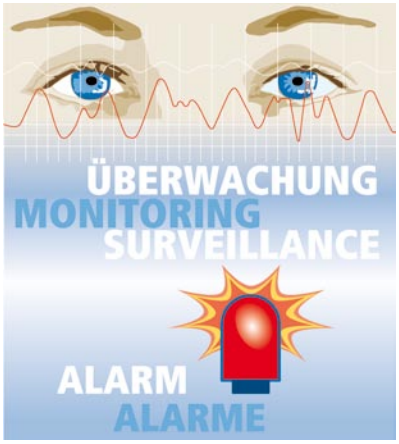
The results of the temperature distribution analysis provided the basis for equipping storage rooms and cold storage cells with an ELPRO central monitoring system. This system enables continuous and consistent documentation and monitoring of climatic conditions including alarm forwarding.
The implemented dataloggers of the ECOLOG-NET family allow autonomous recording of climate values. The ECOLOG-NET devices are fully functional and continue logging even when the higher-level network fails, thus providing a high level of system safety.

Measuring locations for central monitoring
The results of the temperature mapping procedure are used as the basis for determining the measuring locations. The ELPRO system monitors temperature at the following locations:

- Four cold storage cells (2..8°C), each fitted with one temperature sensor.
- Paternoster (15..25°C), with one temperature sensor.
- Storage area 1 and storage area 2 (15..25°C), each fitted with two temperature sensors.



Online monitoring of climate values
Software component elproLOG MONITOR PLUS provides Zur Rose with a tool that enables online monitoring of all climatic conditions that are kept under surveillance. This means that the responsible personnel are always in a position to get information about the current measured values and to react immediately if deviations occur.

Alarming
Zur Rose uses the manifold alarm functions offered by the elproLOG MONITOR PLUS software, on the one hand, to signal alarms with an alarm flash and, on the other hand, to forward alarms via the ELPRO alarm interface on a telephone dial unit. Thus, the responsible personnel have round-the-clock information about the alarm status.

Installation and commissioning
The scope of services provided by ELPRO also includes professional installing and commissioning of the system.

Realization

The whole project involved close collaboration between Zur Rose and ELPRO. This enabled optimal consideration of the specific requirements laid down by Zur Rose.

Customer benefits

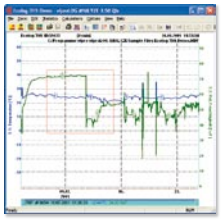
The cooperation with ELPRO allowed Zur Rose to continue to concentrate on their key functions. ELPRO's wide experience in the field of climate measurement technology in a GMP environment made a targeted and efficient realization of the requirements possible.

Central monitoring system

The ELPRO central monitoring system provides Zur Rose with uninterrupted storage room monitoring. Easy data access is made available at a central location and, in the case of deviations, a fully automatic alarm is triggered and the responsible personnel are informed.

The most important customer benefits at a glance:

- The system has a modular structure making it easy to install and extend.
- ELPRO offers comprehensive services, from analysis and conception to realization and commissioning.
- ELPRO provides comprehensive system documentation and conducts employee training courses.



Implemented components

• ECOLOG-NET LP4 (Part No. 2701)	Network compatible datalogger for monitoring and documenting one to four temperatures.
• elproLOG NET (Part No. 2344)	Software package for monitoring, analyzing and documenting climate values.
• Alarm interface (Part No. 2355-A)	Interface for forwarding alarm states to external systems, e.g. factory master control systems, hooters or telephone dial units.
• Telephone dial unit (Part No. 2341-B)	Automatic telephone dial unit for forwarding alarm states.
• Temperature sensor PT100 (Part No. 3188-L0)	PT100 4-wire DIN A ML temperature sensor made of stainless steel.

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