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CASE STUDY

DEVICE-INTEGRATED FIRE PROTECTION IN CLIMATE CHAMBERS

TK Elevator is one of the world's largest manufacturers of elevator installations. Their product portfolio comprises passenger and goods elevators, escalators and moving walks, passenger boarding bridges, stair and platform lifts.

For these products, a permanent and proper functioning is of highest priority. Special attention was given to the topic by accessibility requirements. For people who are dependent on barrier-free environments, service interruptions have a direct impact on their quality of life.

In order to ensure high product safety and to avoid potential failures in the field, TK Elevator also tests essential components under extreme climatic conditions during the development phase. In climate tests, technical components are systematically tested in advance for their durability, limiting conditions and probabilities of failure. The smooth functioning of the components and electronics is often accompanied by many different tests in climate chambers.

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Since our climate chambers also run during the weekend,
we rely on automatic miniature fire extinguishers.

Reinhard Krämer, Head of Components + Testing
 TK ELEVATOR INNOVATION AND OPERATIONS GMBH



A climate chamber is a technical device. Temperature and moisture analysis can be individually defined via technical settings. The internal conditions are constantly measured by sensors and electronically adjusted to the required condition. This way, different environments can be simulated and the electronics can be tested in terms of service life. These tests under extreme conditions inside the climate chambers can cause fires. In 2020, a climate chamber fire at an electronics giant caused damage running into millions. On the one hand, the value of such a climate chamber is very high. On the other hand, these tests often run for several days and nights. Thus, there is no employee on site at night who may discover and extinguish a possible fire at an early stage. For the protection of the climate chamber and the laboratory, TK Elevator relies on the AMFE in its climate chambers. Besides the climate chamber, the AMFE also protects from larger damage caused by fire in the climate chamber. Reinhardt Krämer Head of Components + Testing is excited about them: "The installation of this small fire extinguisher allows us to test our components under extreme conditions free from worry."

To ensure the operational safety of the climate chamber, TK Elevator cooperated with Multicomssystem, one of JOB's sales partners. The focus was on the quick and residue-free extinguishing of incipient fires in the climate chamber. The decision was made to choose the **Automatic Miniature Fire Extinguishers (AMFE)**. An extinguishing unit (cylinder and activation head with thermobulb) integrated in the climate chamber that automatically triggers an extinguishing process (sprinkler principle) when a pre-set temperature is exceeded or when triggered remotely (smoke detector).

PROJECT SUMMARY:

Country: Germany
 AMFE partner: Multicomssystem OHG
 Customer: TK Elevator
 Segment: Research
 AMFE Solution: R-AMFE 93°C



For questions about possible applications or technical details about the AMFE mini fire extinguisher, please feel free to contact Nico Kühn. (Nico.Kuehn@job-group.com).

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