

Case Study

Cutting-Edge Fire Protection System





A turnkey solution

Customer and task

Engel's portfolio includes motors, gears, and control units. They focus on the customized development and production of innovative and high-quality servo motors. They develop, design, and manufacture products in a 2,800 m² area.

In the production area, it's important parts and components are available both quickly and accurately. The warehouse inventory management system confirms when incoming goods arrive in the receiving area and sends them for quality control. In an ESD-protected environment, crates on trays store parts and components.

Solution

Kardex installed a Vertical Lift Module (VLM) Shuttle XP with an integrated fire protection system.

The use of nitrogen, an inert gas, makes this system unique. It's residue-free and rarely reacts with other substances. If a fire occurs, nitrogen releases inside the VLM via vertically-lined nozzle jets decreasing the oxygen concentration and extinguishing the fire. Next, to ensure safety and prevent a fire from reigniting, a "hold flooding" occurs. This floods the unit again and keeps the oxygen concentration low for a minimum of ten minutes.

An early warning system continuously takes air samples from plastic pipes along the VLM. It tests air particles and if the concentration is too high, a visual and acoustic alarm signals and nitrogen floods the unit. Automatic activation is delayed so that anyone in the danger area can escape first.

Case at a glance

How we took our customer from task to solution

Based in Walluf, Germany, Engel Elektroantriebe GmbH develops, designs, and manufactures components and systems for electric drive technology. Kardex installed a space-saving storage unit to store motor parts with an innovative fire protection system. In an emergency, the system immediately detects smoke and extinguishes the fire source before the unit and its products suffer any damage.

Reduced
production
downtime

Immediate
smoke
detection

Keeps stored
goods and unit
safe



Scope of delivery



1 Kardex Shuttle 700 with three access openings
across three floors
W: 3,050 mm | D: 864 mm | H: 14,950mm



Kardex Power Pick System warehouse management
software with a link to the Abas ERP system



Fire extinguishing system in line with VdS guidelines