



Royal Air Force Station Lakenheath |  
Case Study Refrigeration & Building Management Systems

## Building Management with System Domain Expertise: Project Execution, GLT Technology, Software

“Ready for take-off” — The successful debut of the „Virtus Tectum Grid” took place at the Royal Air Force Station Lakenheath as part of the commissary modernization.

Eckelmann expands and optimizes its solution portfolio in the area of building management technology with the Virtus Tectum Grid building management system.

“Virtus Tectum Grid (VTG) expands our solution portfolio for building automation with a crucial overarching control level. With VTG, we were able to easily realize visualization and touch operation for the ventilation system for the customer.”

Thomas Behr | Member of the Management, Eckelmann AG



### Objective

Eckelmann Automated Refrigeration & Buildings have been automating supermarket buildings in Germany for decades, including custom visualization solutions. The “installed base” now includes well over one hundred systems. As part of the technological advancement and internationalization of Eckelmann building management technology, the premiere of “Virtus Tectum Grid” was celebrated in 2020.

Virtus Tectum Grid was installed and put into operation for the first time in the commissary of the Royal Air Force Station Lakenheath, a military airfield used by the United States Air Forces in Europe (USAFE) in the United Kingdom.

As part of this next-generation project, the supermarket was modernized in cooperation with a major American manufacturer of refrigeration equipment, including the cooling rooms and furniture. The focus was on the new refrigeration system and the building’s large ventilation system.

### Eckelmann’s Performance

With about 4,500 stationed soldiers and 2,000 civilians, Lakenheath — along with Mildenhall — is one of the two largest USAFE locations in the United Kingdom.

### Performance by Eckelmann

- › Controller with application for the new ventilation system.
- › Virtus Tectum Grid integrates and engineers all data, processes, and applications of the building. It also realizes the visualization, operation, reporting, and analysis of this data.
- › The central core element of the building ILC 2050 BI. The control acts as a link between the common bus protocols at the field level and the open IoT world, which opens up all possibilities of future-oriented IT systems for building management.
- › During the “guided commissioning” with DeCa officials, the refrigeration system, leak detection, and other systems were put into operation and integrated into Virtus Tectum Grid.
- › The operation of the refrigeration system is done via Virtus Basic Desk. Since the systems Virtus Tectum Grid (VTG) and Virtus Basic Desk (VBD = refrigeration control) are both IoT-capable and can be easily operated via a web browser, a simple solution for integrating the VBD into the higher-level control system was found.



› Premiere for the Virtus Tectum Grid building management system: it handles the integration and engineering of all data, processes and applications for the building. Eckelmann visualized all relevant data from a single source and implemented operation, reporting and analysis based on this information.

## Application

In the Lakenheath commissary market (UK), the Eckelmann team used the Virtus Tectum Grid (VTG) building management system for the first time and with great success. VTG expands the Eckelmann solution portfolio in the field of building management technology and meets the increasing demands of the market.

Commissioning

Automated  
supermarkets,  
well over

**1** Week

**100** Systems

## Special Features

- › The commissioning of the heating registers in the ventilation system was carried out remotely from Wiesbaden. A cost-saving measure that also significantly reduces the CO2 footprint.
- › The “Virtus Tectum Grid” building management system offers Eckelmann customers flexible, data protocol-independent automation of their buildings with a high level of data security through modern encryption technology. The visualization of the building technology ensures users always have an overview and control of the relevant building areas.
- › The Eanalytics building management system also enables simple connection of field devices or systems with all or Ethernet interfaces. The data points captured are defined once at the beginning and are then available to the entire system.
- › The data point becomes a data information object that is accessible throughout the network — whether in the control, server, visualization, or on other devices. This ensures that all data is always available in the same structure.

## Do you have any questions?

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