

# Case study - Digital Twin in Meat Processing



COMPANY

**Krekenavos Agrofirma**

INDUSTRY

**Meat processing**

INFRASTRUCTURE

**Refrigeration**

AB Krekenavos Agrofirma is one of the largest meat processing companies in the Baltic States. Company's Cooling system consists of two stages of -40°C and -10°C ammonia refrigerant and one stage for glycol. There are 2 compressors at -40°C ammonia section, 3 compressors at -10°C section and glycol is cooled through the heat exchangers from -10°C section.

## Problem

High energy consumption, unrealized saving potential of refrigeration process, high CO<sub>2</sub> emissions, inability of optimize maintenance costs, change of technical personnel

## Solution

EA-SAS Cooling Digital Twin technology that collects and analyzes real-time data to automatically calculate mass-energy balance and optimum control Set points for refrigeration compressors operation

### COLLECT

Inventory and real time data collection

### STORE DATA

Process data from different components in one database

### CONTROL

Data analytics and ML to optimally control

### SAVE

Electricity energy and maintenance costs

## Project outcomes



### Electricity savings

#### Up to 37,3 % savings of electricity consumption

Electricity peak consumption reduced from 900 kW to 600 kW

### KPI's tracking 24/7

Refrigeration energy consumption on consumer side

Compressors operation state, COP, isentropic and volumetric efficiency

Condensers and evaporators efficiency

### Data driven maintenance decisions

Maintenance planning and recommendations for further improvement and CAPEX optimization



Interested? Contact us: [info@energyadvice.it](mailto:info@energyadvice.it)  
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