

Application

Monitoring and measuring gas mixtures in food packaging

Goal

Ensuring product quality and longevity

Sector

Food Industry

Customer

Leading Dairy Producer in Italy



Precision Gas Monitoring Enhancing Product Quality

In the Parmesan cheese production

Overview

A leading Italian dairy company, was looking for a reliable solution to monitor and measure the gas mixture used in the packaging of Parmesan cheese.

Ensuring the correct gas composition in each bag was essential to maintain product quality, extend shelf life and reduce waste.

Customer Challenge

To prevent spoilage and ensure product freshness, the dairy producer needed a precise system to measure and monitor the nitrogen and argon flow used in their packaging process. Achieving an accurate gas composition was essential for enhanced storage conditions and consistent quality.

Approach

SUTO iTEC, in collaboration with a trusted local Italian distributor, implemented several S418 Compact Flow Meter specifically calibrated for gas flow measurements.

The Italian distributor facilitated the integration of SUTO iTEC instruments into the dairy producer's packaging line, ensuring that each bag of Parmesan received the correct proportions of nitrogen and argon for optimal preservation.

The dairy producer selected the S418 for its:

- ▶ **High Measurement Accuracy:**
Ensures precise flow and composition control.
- ▶ **Integrated Data Logging:**
Records data continuously for quality analysis.
- ▶ **Easy Installation:**
Compact design and built-in flow conditioner simplify setup.
- ▶ **Wireless Monitoring:**
Supports remote configuration and monitoring via a smart-phone app.



Results

By using the S418 Thermal Mass Flow Meter, the dairy producer achieved the following:

- ▶ **Gas Composition Accuracy:** Verified a stable flow mix of 95% nitrogen and 5% argon, ideal for cheese preservation.
- ▶ **Enhanced Food Storage:** Improved storage conditions due to consistent monitoring of the gas mixture.
- ▶ **Reduced Food Waste:** Minimized waste from spoiled products, by extending shelf life, contributing to sustainable practices.

Increased shelf life
for packed cheese

15%

Reduced
Spoilage Rates

20%

Conclusion

Through the combined efforts of SUTO iTEC and its local Italian distributor, the dairy producer has successfully optimized its packaging process, resulting in improved food preservation and reduced environmental impact.

This collaboration underlines the value of precision and expertise in improving food quality and sustainability.



Be smart. Measure it.