As a company in the baked goods industry, you may be a small local bakery, or a larger operation that is part of a global company. But no matter what type of products your bakery produces, from bread, biscuits, and crackers to cookies and cakes, you are constantly striving to achieve the highest level of quality in your end product. At the same time, you strive for increased flexibility and agility in your operations, while you work to improve processes and reduce operational costs.

Challenges

Your consumers are always looking to try something new and different, while looking at taste and nutritional value of baked goods when making a buying decision. To meet this consumer demand for new products, bakeries like yours are continually introducing new varieties to satisfy their customers. You may include new flavorings and nutrients, or package the products differently to meet the demand of busy consumers. Many customers will make a final buying decision based on product appearance when at the store. For example, bread with a perfectly cooked crust is preferred to an under-cooked loaf. Furthermore, customer satisfaction with product quality will impact future consumer purchases, and this requires you to monitor operations to meet and maintain high quality standards.

Currently, many grocery stores are selling bakery products at or below cost to act as a loss leader for other items, like higher-margin meat and cheese products. This competition in the marketplace requires you to closely control and reduce manufacturing costs whenever possible.

Overview

PlantPAx Solutions for Baked Goods Applications

A wealth of capabilities in an integrated solution

Issues
- Recipe Management
- Batch Execution
- Oven Control
- Flexibility
- Asset Performance

Results
- Reduce Waste
- Increase Throughput
- Reduce Changeover
- Decrease Time to Market
- Reduce Cycle Time
Improving Production Performance

By installing data collection systems to monitor machine and line performance, you can monitor current status and provide information for analyzing machine downtime and determine the root cause of issues on the line.

PlantPAx™ can provide machine and line-level performance monitoring through Production Intelligence solutions. For the enterprise, PlantPAx provides a CPG suite that allows for order workflow across the entire plant and streamlines operations from raw receipt to finished goods. It also tracks production and consumptions, determines yield throughout the process and offers mass balance at packaging.

Mixing Area and Batch Control

Proper recipe management, consistent batch execution and thorough data collection and analysis are critical, front-line activities in the production of your baked goods. Failure at any step can lead to lost production time, waste, unplanned maintenance or even the loss of valued customers due to inconsistent quality.

The Rockwell Automation® PlantPAx system can alleviate these concerns through:

- ISA-88 compliant phase construction and management, both at the controller level or server level as batch and application sizes require.
- An Integrated Batch view that allows the operator start, stop, hold, abort and restart the recipes and phases by providing management of control elements and visibility into sequential progression of the batch phases simultaneously.
- Golden Batch comparison and Gantt Chart analysis, as well as standard out-of-the-box reports for Forward Tracing and Backward Tracking of Lot IDs.
Flexible and Agile Packaging

Rapid changes in consumer demand and product requirements require flexible machine design and control in the packaging area. By basing machine control programming on industry standards, change-over times can be reduced and interoperability can be improved, resulting in rapid changeover for new production demands.

PlantPAx, with the Rockwell Automation Integrated Architecture™ at its core, provides:

- Flexible and agile architectures that allow you to scale down to On-Machine™ packaging solutions or implement enterprise-wide control solutions as demand changes.
- Industry standard architectures that have been built through work with industry leading OEMs.
- Open topologies, and easy integration for significant cost savings.

Proofing, Forming and Oven Control

Consistent control over your forming applications, proofing and fermentation rooms, and ultimately your ovens, provides you the flexibility to adapt to changing product requirements, ambient conditions or to fine tune your operations.

The Rockwell Automation PlantPAx system can address these diverse control needs by providing:

- Scalable DCS-like functionality and more.
- Base regulatory PID control through Advanced Model Predictive Control.
- A complete suite of loop tuning software.

Improved Asset Performance

By implementing tools that can monitor overall performance of your production assets, bakeries are focusing on reducing the time needed for repairing equipment and how they manage their spare parts. At the same time, they are deploying more safety systems to protect employees that work in the packaging area.

PlantPAx provides asset management tools that not only address equipment performance, but also change management, audit capabilities as well as disaster recovery.

“Right from the planning phase of our production line extension Rockwell Automation’s engineering expertise enabled us to define the best possible solutions for our needs,” explains Hannes Huszar, Technical Manager at Mars Austria.
Power of Collaboration

Rockwell Automation has helped baked goods producers just like you in their efforts to improve operations.

When you choose Rockwell Automation, you also tap into the power of our PartnerNetwork™ program – a framework of well-managed relationships based on your needs. Our program provides you with access to a local, regional and global network of best-in-class companies including distributors, system integrators, machine builders, alliances and complementary product providers.

The keystone of our PartnerNetwork is collaboration that allows a seamless relationship with you, built on mutual trust and shared business values.

For additional information please visit:
www.rockwellautomation.com/solutions/process