

Modified Atmosphere Packaging Leak Detection

Background

Modified atmosphere packaging (MAP) is a process developed to extend the shelf life of fresh food products. MAP substitutes the air inside the package with a protective gas mix. The advantage of MAP is that it slows down the chemical reactions that cause product deterioration, which results in a shelf life 2 to 5 times greater than packages with regular air. However, rips, punctures or incomplete seals resulting from issues upstream in the packaging line damage the seal integrity of the package and ultimately impact product quality.

Manufacturers are turning to new technologies to improve product quality, reduce waste or spoilage due to faulty packaging, and comply with increasing quality requirements imposed by their brand and customers.



What's your challenge?

Leaking packs will cause products to spoil faster. As a food manufacturer or packager, you must:

- Ensure the highest level of quality control
- Prevent customer dissatisfaction and product returns
- Maximize production volumes and minimize product waste
- Meet supermarket demands and quality requirements
- Accomodate quick and flexible product changeover

What's your opportunity?

Emerson™ provides a solution that enables 100 % inline testing to ensure no damaged packages leave your facility leading to product losses or costly customer returns. Maintain the highest quality requirements, reduce claims, and gain insight into the production line with automated 100 % testing of all filled packages.



Flexibility

Gain flexibility to meet market demands while maintaining productivity

Quickly configure a sample head to support all packaging types in a wide variety of applications



Productivity

Gain insight into production line performance

Measure up to 200 packs per minute, on-line and in real time



Quality

Reduce costly product losses and waste

Detect leaks at a sensitivity of < 0.3 mm



Compliance

Ensure safe, quality products from your lines and on the shelf

Automatically detect and reject defective packages without slowing down the production line

Recommended Technology

Emerson introduces the Rosemount™ CT4215 Leak Detection System. Typical applications include:

| Products | Packaging Type | Gases |
|---|----------------------------|---|
| Meat, dairy, vegetables, bread, pasta, & more | Trays, pouches, bags, cans | CO ₂ , CO, N ₂ O, |

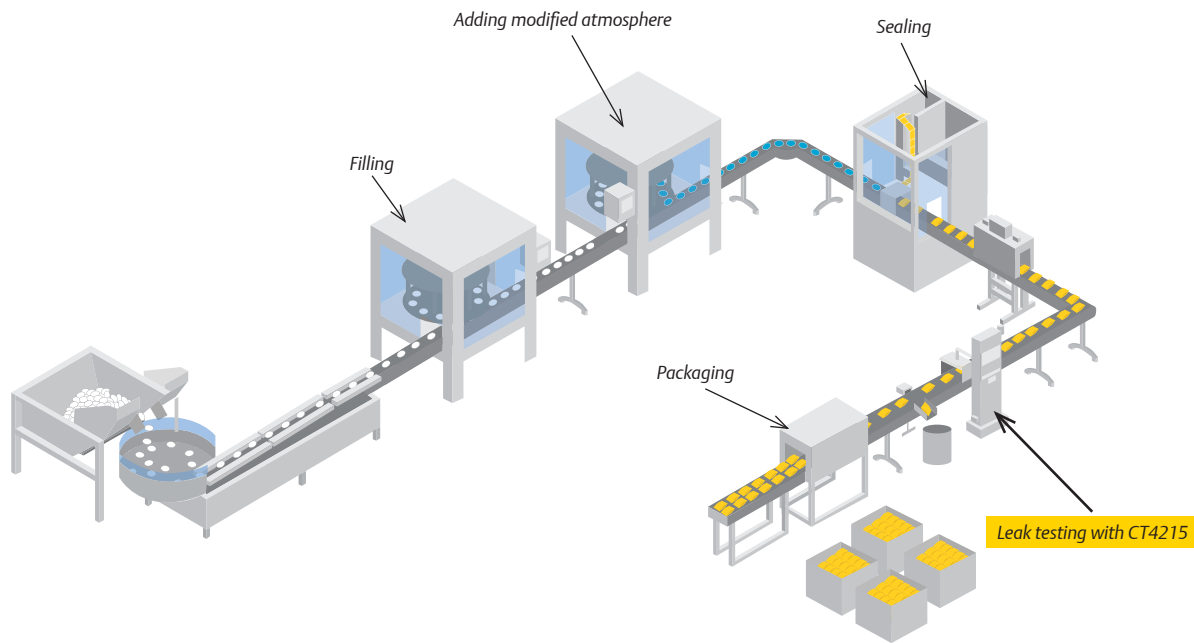
Features & Benefits

| Feature | Benefit |
|------------------------------|---|
| Patented QCL Technology | Detect individual leaking packs with sensitive, fast, and repeatable measurements, reducing customer complaints. |
| Small Footprint | Easy installation and modular design means minimal impact on your production. |
| Automated Rejection | Ensure the highest possible quality by removing damaged packages from the assembly line before they are shipped. |
| Full Data Logging Capability | Monitor production data at-a-glance with user-friendly software. |
| Modular by Design | System can be upgraded with additional lasers or sample head to future proof your investment. |
| Alarming Capabilities | Reduce waste by quickly identifying leaking packages and resolving the issue before it results in unnecessary wasted packaging. |

Easy Integration & Operation

The Rosemount™ CT4215 is designed for easy installation and configuration onto any production line without retrofitting and little to no downtime. User configurable alarms notify operators of required troubleshooting actions when multiple leaking packages are identified, and the system's modular design and flexibility mean future gas requirements and new package types can be easily accommodated.

Figure 1- Typical MAP Production Line



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CSC-ANO-FoodBev-MAP-Leak-Detection