

Food Processing and Packaging

Market Application Publication



Background:

Final product quality is the most important aspect of food manufacturing. Customers expect freshness and consistent taste every time they open a new package of food. Bacteria growth in the final package reduces shelf life, and ultimately leads to an unsatisfied customer. Packaging with dry nitrogen will minimize oxygen and remedy these issues, providing a better customer experience.



Features and Benefits:

- Price of our nitrogen is constant. Supplier Nitrogen is subject to pricing increases, rental agreements, hazmat fees, delivery surcharges, local & state taxes, etc. A nitrogen generator offers long term price stability.
- Your cost increases relative to usage with bulk, dewar or cylinder nitrogen. Costs decrease as usage increases with a nitrogen generator.
- Nitrogen has a very low boiling point, and is continuously evaporating when supplied as liquid in bulk or dewars. It can cost thousands of dollars if these gases are not recaptured.
- A nitrogen generator eliminates the contracts required from bulk gas suppliers. No more automatic renewals, automatic increases or 1-year written notice for contract termination.
- Ease of installation. Pipe in compressed air and pipe out Nitrogen. Contrast this with the installation requirements for a bulk tank, including a concrete pad, fence and significant square footage.
- Complete start up and testing procedure at the factory prior to delivery.
- Very little maintenance or monitoring required once system is up and running. Simple and straightforward operation.
- Proven technology with numerous references available. Over 10,000 successful generator installations.
- Improves food quality by eliminating oxygen, moisture, and all other contaminants within packages .
- Extends product shelf life and ensures original product quality and integrity

Application:

Oxygen and moisture in a package can promote bacteria growth, leading to spoilage, inconsistent flavors, poor product quality and an overall bad customer experience. Dry nitrogen is commonly used in both modified atmosphere and controlled atmosphere packaging to displace oxygen, ultimately minimizing bacteria growth, extending shelf life and improving product quality. While final packaging specifications will vary by product, a 2% O₂ concentration in the final package is typically enough to realize these benefits. Packaging with nitrogen has become the preferred technology because it is economical and “inert”. A Parker Balston Nitrogen Generator, which separates nitrogen and oxygen from a compressed air supply, can often be the most economical method to supply this nitrogen.

Case Study:

Maidstone Coffee (Rochester, NY) uses nitrogen during the packaging process to provide a sterile, controlled environment for their product. Packaging in this manner delivers the highest possible quality, taste and freshness, and extends the shelf-life of the product. If nitrogen is not used during packaging operations, mold growth, moisture migration, product degradation and insect infestation can occur. Maidstone Coffee utilizes Parker Balston Nitrogen Generators to provide the nitrogen for their packaging operations. Every coffee package is flushed with nitrogen to ensure product integrity and maximize the shelf life of the products. The nitrogen generator meets all variable flow & purity control needs for Maidstone, with an outstanding record of uptime performance. A Parker Balston Nitrogen Generator ensures

that Maidstone Coffee continues to produce high-quality food products that meet the demands and expectations of its customers.

