



FOCUS: WINE

More and more winemakers are turning to Cryotech International for a liquid nitrogen dosing system because of our advanced technology, experience, service, price and customer references.

The Challenge

As the wine industry transitions to screw caps, wine makers are presented with new, unique challenges. Although screw caps eliminate the concern of "cork-taint", screw cap bottles have a greater volume of headspace. Wine is exposed to oxygen trapped in the bottle headspace which in turn can result in increased dissolved oxygen levels, even after the cap is applied. Cryotech can help.

The Solution

By introducing liquid nitrogen into the bottle after filling, wine makers reduce headspace O_2 content by more than 70%. Less headspace O_2 results in a significant reduction of dissolved O_2 pickup.

Cryotech has a complete line of LN_2 dosing equipment to automate and control the introduction of LN_2 .

A very small dose of liquid nitrogen is injected into the filled bottle. One part of liquid nitrogen warms and turns into 700 parts of gas, displacing O_2 from the headspace.

Inerting with LN₂ in screw cap wine applications



Partial List of Customers

*Kendall Jackson/Pepi
Bonny Doon
Caymus Vineyards
St. Julian Wine Company
Meridian/Berringer
Ultima*

A dose of LN₂

- * Effectively flushes O₂ out of the bottle head space*
- * Extends shelf-life in screw cap packages*
- * Keeps the fruit in every pour*

More and more winemakers are making the switch to screw tops to preserve the fresh fruit taste of their wines and to reduce the cost of bottling. With this change comes concerns over the additional headspace that would normally be displaced by the cork. This can become a holding area for excess oxygen that can cause oxidation of the wine.

Many of these winemakers have discovered that adding liquid nitrogen dosing to their bottling operations is a cost-effective way to eliminate the excess oxygen and maintain the taste of the wine.

A Cryotech nitrogen-dosing injection system is installed between the filler and the capper. A sensor detects a bottle entering the dosage zone and initiates the injection of a very small dose, about 0.10 g, of liquid nitrogen at a temperature of - 320 degrees F (-196 degrees C) into each bottle. The nitrogen rapidly expands as it changes from a liquid to a gas inside the bottle, and pushes O₂ out of the bottle.

Liquid nitrogen is environmentally friendly, easy to store and relatively inexpensive. The Cryotech dosing equipment is a fully vacuum insulated system that acts like a thermos to keep the nitrogen in liquid form from the canister to the bottle neck. Cryotech's UltraDoser is available with a straight forward FD (Fixed Delay) controller or a PLC based SC (Speed Compensated) controller.



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