

# Liquid Nitrogen Dosing Application Focus



## Preservation

### Beer Bottling

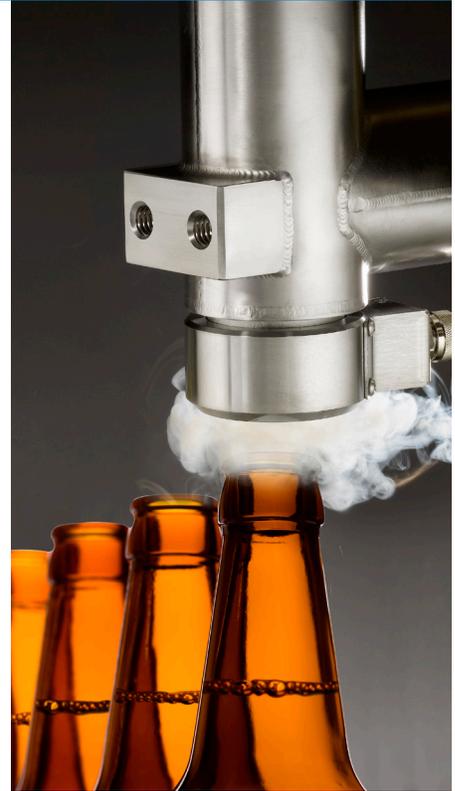
Chart Inc. is known industry wide for its frost-free, vacuum insulated, liquid nitrogen equipment and piping distribution systems. With over 3,000 dosing units installed, Chart has a wealth of application specific knowledge across a wide range of dosing applications.

#### The Challenge

Reduce the TPO down to zero to stabilize the product flavor and increase the shelf-life.

#### The Solution

Because LN<sub>2</sub> dosing is so efficient and the nitrogen gas is inert, this process yields many benefits. One of the most important benefits is total package oxygen reduction (TPO). Just after the droplets of LN<sub>2</sub> enter the bottle, it immediately changes from a liquid to a gas and displaces oxygen in the bottle headspace. This results in lower oxygen content so the CO<sub>2</sub> and nitrogen content are preserved in the beer as intended for a perfect pour. Additionally, capping with a little nitrogen gas still in the bottle creates pressure for easier cork removal for 750 mL bottles.



#### Key Benefits

- Efficiently purges empty bottle of nearly all oxygen
- Maintains CO<sub>2</sub> and nitrogen quality in every pour
- Reduces Total Packaged Oxygen for longer shelf life
- Creates additional pressure for easier cork removal in cork-and-cage bottles





### Inerting with Liquid Nitrogen

- Efficiently purges empty bottle of nearly all oxygen
- Maintains CO<sub>2</sub> and nitrogen quality in every pour
- Reduces Total Packaged Oxygen for longer shelf life
- Creates additional pressure for easier cork removal in cork-and-cage bottles

### Chart Services

- Application support
- System design
- CAD drawings
- On-site equipment demonstrations
- Installation and setup
- Technical support
- Maintenance

For more information on any of our products and services please visit us on the Web at:  
[www.chartdosers.com](http://www.chartdosers.com)

### Customer Testimonial

“A drop of liquid nitrogen vaporizes and eliminates oxygen from the bottle during the filling process, leaving the O<sub>2</sub> content less than 100 parts per billion (ppb). Oxygen content is important, the lower the better. The nitrogen does not affect the taste but the purge and blanket stabilizes the flavor and gives us a longer shelf life.”

— Director of Quality Assurance at the Flying Dog Brewery

Your Local Representative



Chart Inc.

46441 Landing Parkway • Fremont, CA 94538

Phone +1 800.371.3303 • Fax +1 408.577.1567 • Service +1 408.371.4932

[www.chartdosers.com](http://www.chartdosers.com)

© 2016 Chart Inc.

PN 20725974