

MINI LIQUID NITROGEN DOSER

Brief Introduction



Best LN2 Application System in Korea

CVS has committed itself to developing machines for beverages and aluminum extrusion mold cooling systems with experience in developing various beverage-related equipment and technologies that require high vacuum insulation for extended periods of time



Founded in

2009

Design, R&D, Manufacture

- LN2 Doser
- Aluminum Extrusion Mold Liquid Nitrogen Cooling System
- Mini LN2 Doser
- Relief Valve, Vacuum Pipe

Headquarter Located in

14-8, Gimpo-daero 1750beon-gil,
Yangchon-eup, Gimpo-si, Gyeonggi-do,
Republic of Korea, CVS Co., Ltd.

History of CVS

2010

Wool Beverage Co., Ltd.
2 LN2 Doser
Production and Installation

2012

OKF Co., Ltd.
LN2 Doser
Production and Installation

2014

China Hebei Province Langfang
Sunrise
LN2 Doser
Production and Installation

OKF Co., Ltd.
LN2 Doser
Production and Installation

2016

China Hebei Province Langfang
Sunrise
LN2 Doser
production and installation

Wool Beverage Co., Ltd.
2 LN2 Doser
Production and Installation

OKF Co., Ltd.
LN2 Doser
Production and Installation

2019

Dawon Light Metal
Aluminum Extrusion Mold Liquid
Nitrogen Cooling System
production and installation

Korea Telecommunications Research
Institute
Manufacture and installation of HALT
equipment liquid nitrogen supply pipe

Linno Aluminum Co., Ltd.
Aluminum Extrusion Mold Liquid
Nitrogen Cooling System
production and installation

2021

Daeju Industry
LN2 Doser
Production and Installation

Hite Jinro
Lab use LN2 Doser
Production and Installation

Prax Coffee
LN2 Doser
production and installation

OKF Co., Ltd.
LN2 Doser
Production and Installation

2011

OKF Co., Ltd.
2 LN2 Doser
Production and Installation

2013

China Taiyuan
LN2 Doser
Production and Installation

Coca-Cola Korean drink
LN2 Doser
Production and Installation

2015

OKF Co., Ltd.
2 LN2 Doser
Production and Installation

Dongwon F&B
2 LN2 Doser
Production and Installation

2018

Daeil Co., Ltd.
US CRYOTECH Doser Repair

Okdong Co., Ltd.
Aluminum Extrusion Mold Liquid
Nitrogen Cooling System
production and installation

2020

Naturecell Co., Ltd.
2 LN2 Doser
Production and Installation

Ilhwa Co., Ltd.
LN2 Doser
Production and Installation

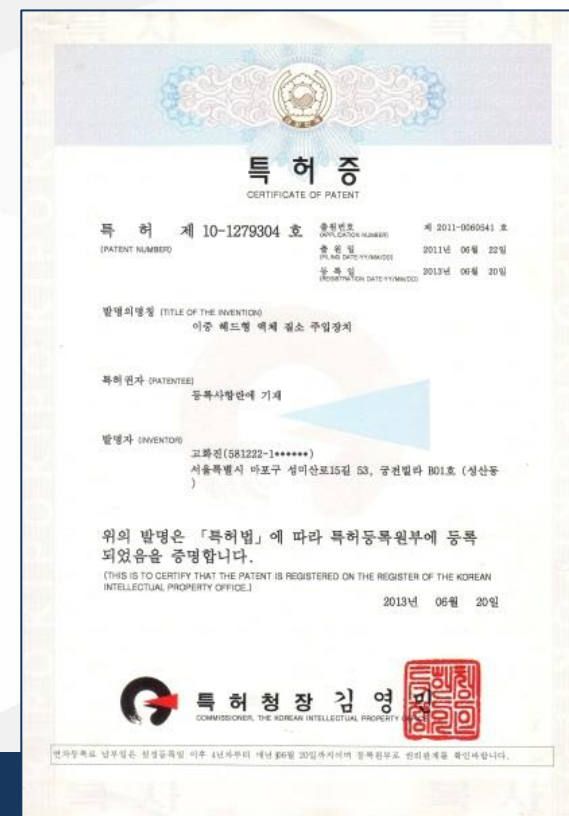
O2 Healthcare
5HEAD Liquid Oxygen Doser and
Vacuum Pipe

Korea Aerospace Industries
Vacuum Pipe
Production and Installation

Certification



Aluminum Extrusion Mold Liquid Nitrogen Cooling System
Patent No. 10-1878283



Double Head Liquid Nitrogen Doser Device
Patent No. 10-1279304

**FOCAL POINT**

- **The can never dents.**
- **Carry out productions through injection of liquid nitrogen.**
- **Mini LN2 Doser can suppress taste changes.**

The can never dents.

Reasons for Dents

When a can is sealed, the internal volume of the beverage product shrinks due to the temperature difference, which causes dents.



Solution

When liquid nitrogen is injected, it is vaporized inside to expand the volume and increase the internal pressure, preventing cans from denting.

Seamed cans
without LN2 injected



Seamed cans
with LN2 injected

The can never dents.

World's First / Only

Mini LN2 Doser M2100

M2100, a mini-sized LN2 doser developed by CVS, is the world's first small-sized LN2 doser.

When liquid nitrogen is injected into the can for seaming, it is vaporized inside to increase the internal pressure.

This internal pressure fills up the can, essentially preventing it from denting.



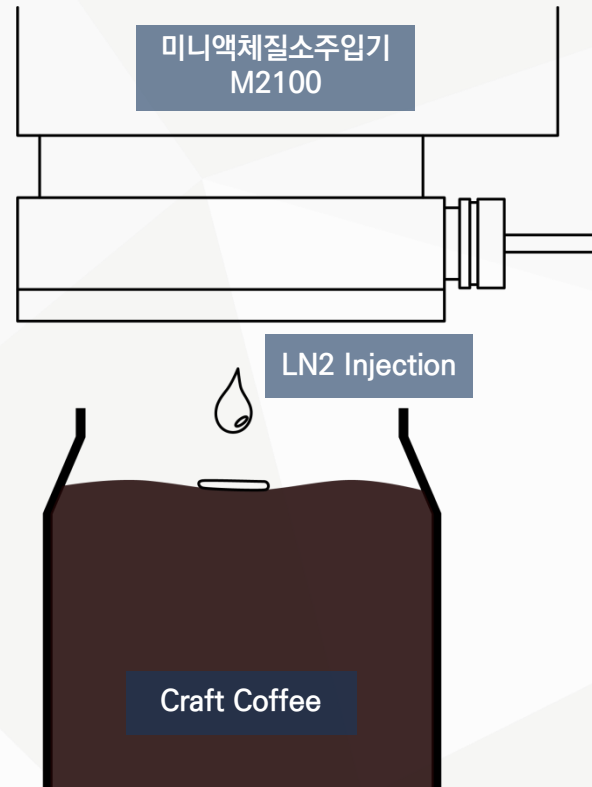
Installed in Port Can Coffee in Gyesan, Incheon

The can never dents.



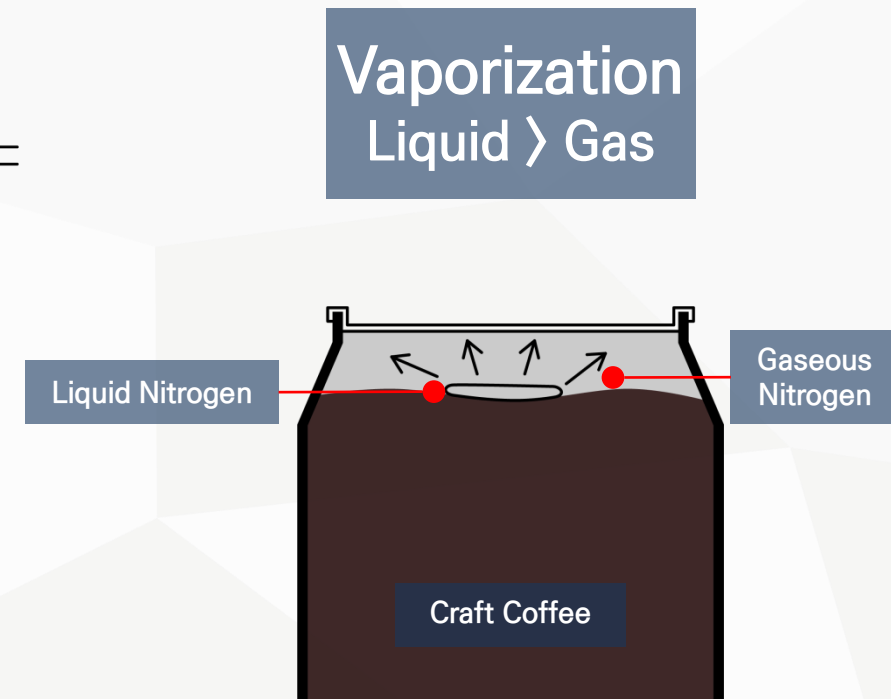
STEP 01

Fill the beverage into an aluminum can.



STEP 02

Inject liquid nitrogen into the can filled with the beverage.



STEP 03

The can does not dent since liquid vaporization is prevented once the sealed cans are seamed using a can seamer.



**Carry out productions through
injection of liquid nitrogen.**



**Supply of LN2 dosers for domestic and overseas
mass production lines over the last 10 years**

LN2 Equipment Manufacturer

CVS has committed itself to developing machines for beverages and aluminum extrusion mold cooling systems with experience in developing various equipment and technologies for cryogenic gas that requires high vacuum insulation for extended periods of time.



Carry out productions through injection of liquid nitrogen.

The LN2 dosers produced by CVS has been supplied to mid-to-large sized beverage manufacturers for their can lines, such as Coca-Cola Korea, Dongwon F&B, OKF, and Wool Beverage for over 10 years.

As a company specializing in manufacturing LN2 related equipment, our products are developed with our proprietary technologies which are also patented.

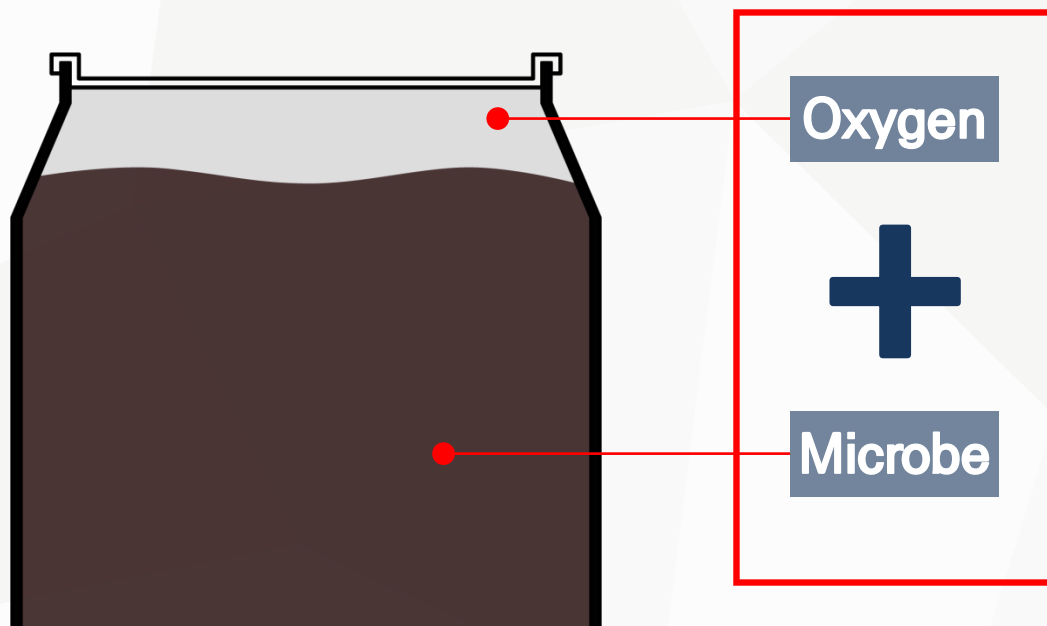
CVS are confident in saying that our LN2 equipment manufacturing technology is the finest in all of Korea.



Mini LN2 Doser can suppress taste changes.

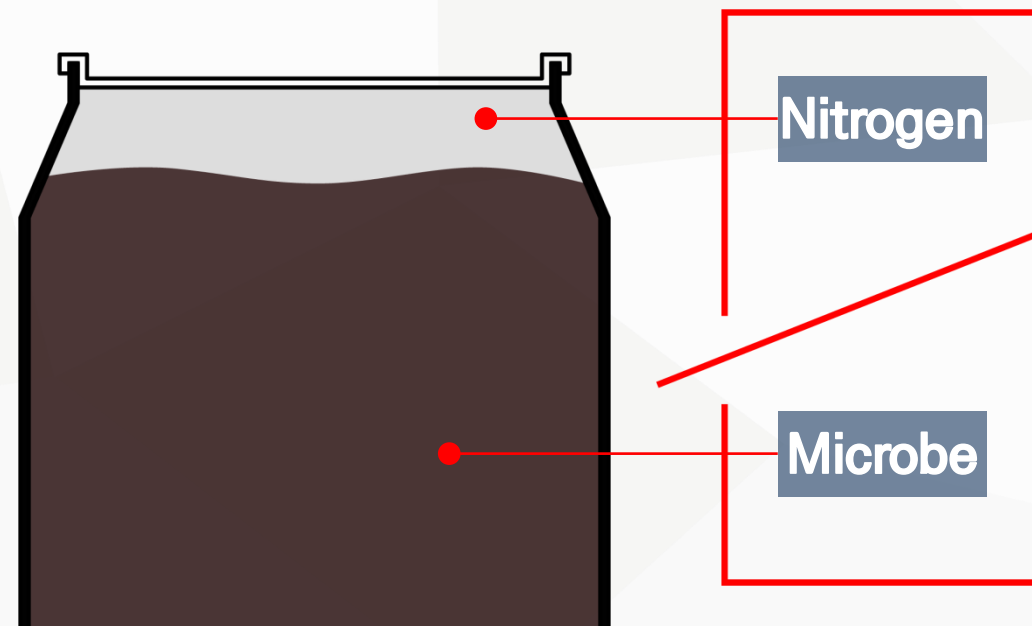
Dissolved Oxygen Residue in Existing Canned Beverages

The current can seaming process can lead to dissolved oxygen residue in the cans, causing microbial growth.



Dissolved Oxygen Reduction in Canned Beverages Injected with LN2

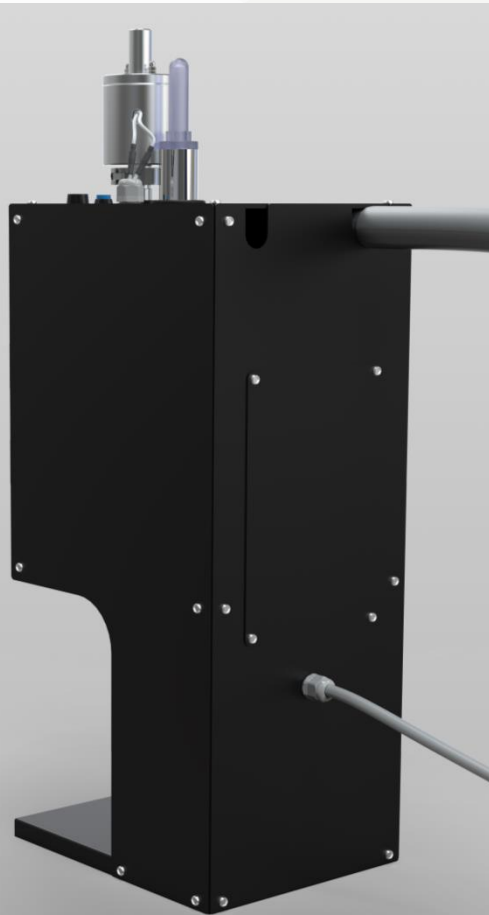
When liquid nitrogen is injected, the nitrogen, an inert gas, expunge the remaining oxygen inside while occupying its place, suppressing microbial growth and preventing any taste changes.





MINI LIQUID NITROGEN DOSER

MINI LIQUID NITROGEN DOSER (M-2100)



Thank You !



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