

CryoFiller Series

Automatic LN₂ Doser

CryoFiller automatic liquid nitrogen filling system is designed to inject LN₂ into containers at required pace. After filling into container, liquid nitrogen vaporizes to nitrogen gas and expel air out of container. As a result, oxygen and humidity concentration are reduced, and a suitable pressure is built in container.



Features

- Siemens touch screen controller and PLC platform, fully automatic operation.
- Adjustable filling pace, up to 600 CPM in discrete dosing mode or 2000 CPM in continuous injection mode.
- Speed sensor: real-time detection of bottle movement speed, filling speed will be adjusted accordingly.
- Product sensor: installed at upstream of the filling machine, detecting whether bottle is coming. If no bottle coming, liquid nitrogen will not be injected to avoid waste.
- ±5% accuracy of dose weight.
- Electric heating at nozzle, prevent condensation water and freezing ice.
- Various sizes nozzles are supplied as standard, customized nozzle available.
- Gas-liquid separator to guarantee liquid nitrogen is injected.
- Vacuum insulation for low liquid nitrogen consumption.
- Imported high quality electromagnetic valve for high reliability.
- Stainless steel SUS304 material for easy cleaning and no rust.



Benefits

- Inert packaging (low oxygen concentration) maintains product freshness and extends product shelf life.
- Reduce the gram weight of PET, lower cost and more environmentally friendly.
- Maintain the original shape of lightweight bottle, keep the hardness of the bottle wall consistent, and improve labeling efficiency.
- Build a suitable bottle pressure and eliminate the problem of flat bottles.
- Enhance product stacking capacity and improve warehouse space utilization.
- Maintain the high quality of organic products.

Containers applicable

- Plastic bottle: soft drink, edible oil, mineral water
- Aluminum can: soft drink
- Steel can: milk powder, protein powder, organic supplement powder
- Glass bottle: wine



Specification

Model	CryoFiller-L	CryoFiller-H
Type	Low speed	High speed
Maximum Discrete Dosing Speed (CPM)	200	600
Continuous Stream Dosing Speed (CPM)	N/A	600~2000
Dose Duration	15 ~ 1000 ms	15 ~ 1000 ms
Nozzle Size	1.5mm, 2.0mm, 2.5mm, 3.0mm	1.0mm, 1.2mm, 1.5mm, 1.8mm, 2.5mm
Accuracy by Dose Weight	±5%	±5%
LN ₂ per Dose	0.01-14 g	0.01-14 g
Touch Screen Display	Siemens	Siemens
PLC Platform	Siemens	Siemens
Speed Sync Compensation	√	√
Injection Positioning Tech	√	√
Fixed Delayed Injection	√	√
Constant Speed Mode	√	√
Vacuum Insulation	√	√
LN ₂ Consumption	0.15 L/h	0.20L/h
Material	SUS304	SUS304
Weight	15Kg	22Kg
Power	100W	100W
Power Supply	110~240V,50/60Hz	110~240V,50/60Hz
LN ₂ Supply Pressure	≤0.15Mpa	≤0.15Mpa
Pressurized Air Pressure (N ₂ recommended)	0.4~0.65Mpa	0.4~0.65Mpa