



UltraDoser 800s Liquid Nitrogen Dosing

The UltraDoser® is the multi-purpose liquid nitrogen (LN₂) dosing system utilizing advanced cryogenic technology and PLC programming.

Chart engineers designed an ultra-efficient system for low to medium production line speeds to dispense a precise dose of LN₂ into every container every time. The LN₂ gasifies and is either trapped in the container to add rigidity or escapes with oxygen to inert the headspace.

Features

- **Compact Size** – enables installation in limited spaces
- **Precise Dosing** – delivers consistent, accurate dosing
- **Discrete Dosing** – up to 800* containers per minute
- **Discrete or Continuous Dosing** – change over defined by user
- **Vacuum Insulated Technology** – the most efficient use of LN₂
- **SoftDose™ Compatible** – Chart's proven technology for hot fill, powder, and granular applications
- **RemoteDose™ Capable** – remote access and control to increase efficiency and reduce downtime
- **MicroDose™ Capable** – consistent, accurate dosing over all line speeds

* Results obtained under specific conditions.



How it Works

LN₂ is supplied to the UltraDoser by a vacuum insulated hose and flows into the dosing head. A sensor detects the speed of the line (encoder compatible); a second sensor detects the presence of a container. When a container is detected, the dosing head opens and dispenses an exact amount of pure LN₂. A PLC (Programmable Logic Controller) is the brains behind integrating the sensors, controls and human interface.

Key Benefits

- **Lightweight PET** – reduce the weight of PET for cost and environmental savings
- **Glass to PET Transition** – eliminate glass safety hazards and weight of containers
- **Bottle Rigidity** – maintain bottle shape even with lighter weight containers
- **Eliminate Paneling** – increase the internal pressure to off set paneling issues
- **Oxygen Reduction** – create an inert environment to preserve product freshness
- **Extend Shelf Life** – minimize oxygen levels
- **Ease of Labeling** – consistent bottle rigidity creates an efficient labeling process
- **Reduce Nitrogen Consumption** – measurable and repeatable liquid doses
- **Maximize Warehouse Storage Space** – increasing product stackability utilizes less square footage
- **Stabilize Organic Products** – extend shelf life without preservatives



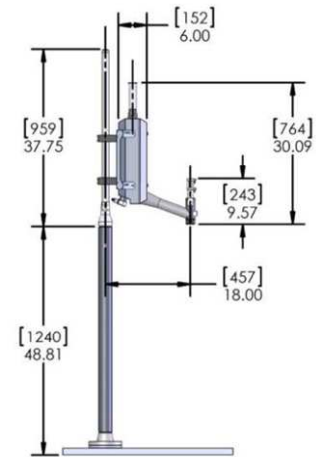
UltraDoser® Technical Specifications



Materials	Stainless Steel Series 300*
Weight	32 lbs (14.5 kg)
Body Dimensions	18"H x 6"W (457.2 x 152 mm)
Dosing Head Dimensions	9.5"H x 2"W (241 x 50.8 mm)
Arm Reach	12" - 18" (304.8 - 457 mm)
Head Pressure	0.45 psi (0.03 bar)
Nozzles	Ships with 0.040", 0.050", 0.060" 0.020" - 0.100" (0.005" increments) available
System Utilities	Liquid Nitrogen: 3 - 22 psi (0.2- 1.5 bar) Gaseous Nitrogen: 60 - 100 psi (4.1-6.9 bar) Electricity: 110 - 240VAC; 50/60Hz, 110W
Steady State Consumption	0.04 gal (0.15 liter) / hour
EP Head Compatible	Yes
Quick Service Feature	No
Vacuum Insulated	Yes
Flexible Arm	No
SoftDose™ Compatible	Yes

* 304 standard, 316L available upon request

UltraDoser® Dimensions



Controller Technical Specifications

Model	800S
PLC Platform	Siemens
Display	Mono Keypad
Dose Duration	25 to 1000 ms(1 ms intervals)
Dose Volume	0.01 to 4 grams/dose
Discrete Dosing (cpm)	800*
Maximum Discrete Dosing (cpm)	1000*
MicroDose™ Technology	✓
Line Speed Auto Detect	✓
Electronic Dose Targeting	✓
Fixed Delay Mode	✓
Speed Compensated Mode	✓
Accuracy	± 5%
Multiple Language	
RemoteDose™ Capable	
Recipe Storage	
Certifications	CE, NEMA 4X

*Remarks obtained under specific conditions.

