



## UltraDoser Liquid Nitrogen Dosing

The UltraDoser is the multi-purpose liquid nitrogen (LN<sub>2</sub>) 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 LN<sub>2</sub> into every container every time. The LN<sub>2</sub> 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 1800 containers per minute\* (controller dependant)
- **Discrete or Continuous Dosing** – change over defined by user
- **Vacuum Insulated Technology** – the most efficient use of LN<sub>2</sub>
- **SoftDose Compatible** – Chart's proven technology for hot fill, powder, and granular applications.

\* Results obtained under specific conditions.



### How it Works

LN<sub>2</sub> is supplied to the UltraDoser by a standard 10 ft (3 mt) vacuum insulated Cryotech/Flex hose (various lengths available) and flows into the dosing head. A 24vdc PNP sensor detects the speed of the line (encoder compatible for higher speeds); a second 24vdc PNP sensor detects the presence of a container. When a container is detected, the dosing head opens and dispenses an exact amount of pure LN<sub>2</sub>.

### 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 offset 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

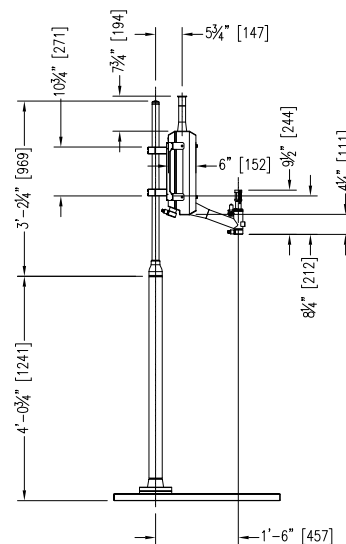


# UltraDoser Technical Specifications



<b>Materials</b>	Stainless Steel Series 300
<b>Weight</b>	32 lbs (14.5 kg)
<b>Body Dimensions</b>	18"H x 6"W (762 x 152 mm)
<b>Dosing Head Dimensions</b>	9.5"H x 2"W (241 x 50.8 mm)
<b>Arm Reach</b>	18" (457 mm)
<b>Head Pressure</b>	0.45 psi (0.03 bar)
<b>Nozzles</b>	Min. 0.020" - Max. 0.120" available Ships with 0.040" (installed), 0.050", 0.060"
<b>System Utilities</b>	<b>Liquid Nitrogen:</b> 3 - 22 psi (0.2 - 1.5 bar) <b>Gaseous Nitrogen:</b> 60 - 100 psi (4.1-6.9 bar) <b>Electricity:</b> 110 - 240VAC; 50/60Hz, 110W
<b>Steady State Consumption</b>	0.04 gal (0.15 liter) / hour
<b>EP Head Compatible</b>	Yes
<b>Quick Service Feature</b>	No
<b>Vacuum Insulated</b>	Yes
<b>Flexible Arm</b>	No
<b>SoftDose Compatible</b>	Yes

## UltraDoser Dimensions



# Controller Technical Specifications

	AB1500	S7200	SC350c	FS150
<b>Dimensions</b>	20"H x 8"D x 11"W (508 x 216 x 279 mm)	19.8"H x 7.8"D x 12.3"W (503 x 198 x 312 mm)	10.8"H x 5.7"D x 9.0"W (273 x 145 x 230 mm)	10.8"H x 5.7"D x 9.0"W (273 x 145 x 230mm)
<b>Weight</b>	22.5 lbs (10.2 kg)	22.5 lbs (10.2 kg)	10.5 lbs (4.8 kg)	9.5 lbs (4.3 kg)
<b>Screen Dimensions</b>	3.5" x 4.5" (88.9 x 114.3 mm)	3.5" x 4.75" (88.9 x 120.7 mm)	3.25" x 0.75" (82.5 x 19.0 mm)	1.0" x 1.25" (25.4 x 31.8 mm)
<b>PLC Platform</b>	Allen Bradley	Siemens	Siemens	Siemens
<b>Dosing Range</b>	0.01 - 1.4 grams/dose	0.01 - 1.4 grams/dose	0.01 - 14 grams/dose	0.01 - 7 grams/dose
<b>Timing Range</b>	10 to 100 ms (in 1 ms intervals)	10 to 100 ms (in 1 ms intervals)	15 to 1000 ms (in 1 ms intervals)	10 to 500 ms (in 10 ms intervals)
<b>Encoder Compatible</b>	Yes	Yes	No	No
<b>Discrete Dosing</b>	Up to 1800 cpm*	Up to 1800 cpm*	Up to 350 cpm	up to 150 cpm
<b>Line Speed Auto Detect</b>	Yes	No	No	No
<b>Electronic Dose Targeting</b>	Yes	Yes	Yes	No
<b>Fixed Delay Mode</b>	Yes	No	Yes	Yes
<b>Speed Compensated Mode</b>	Yes	Yes	Yes	No
<b>Accuracy</b>	± 5% of dose value	± 5% of dose value	± 5% of dose value	± 5% of dose value
<b>Multiple Languages</b>	No	Yes	No	No
<b>Ethernet Ready</b>	Yes (w/ additional module)	No	No	No
<b>Recipe Storage</b>	Yes	Yes	No	No
<b>Certifications</b>	CE, NEMA 4X	CE, NEMA 4X	CE, NEMA 4X	CE, NEMA 4X

\* Results obtained under specific conditions.

## Your Local Representative



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