



CRYOTECH
INTERNATIONAL

SPECIALISTS IN CRYOGENIC EQUIPMENT



UltraDoserTM SC350

Low Speed LN₂ dosing system for pressurization and inerting. Straight forward controls for discrete dosing at variable line speeds up to 350 cpm.

All products come with Cryotech's renowned customer service from conceptual design to implementation and are backed by a one year warranty.

The UltraDoser SC350 is the ideal general purpose liquid nitrogen (LN₂) dosing system. Using advanced cryogenic technology, Cryotech engineers designed an ultra-efficient, double walled, sealed vacuum unit likened to a "high-tech thermos." Typically installed after the filler and before the capper/sealer, the UltraDoser SC350 dispenses a measured dose of LN₂. Once the LN₂ (-320F/-195C) is introduced into the container, it immediately picks up heat and turns into gaseous nitrogen, expanding 700 times in the process. When trapped inside the container, the gaseous nitrogen creates pressure and adds rigidity to the container. For headspace inerting applications, the rapidly expanding gas is allowed to escape before the product is sealed, flushing oxygen out of the container.

The UltraDoser SC350 has the following features:

- Sealed, vacuum insulation for frost-free operation
- Consistent, accurate dosing over all line speeds
- Rigid arm facilitates installation
- Compact footprint
- Discrete doses (pulses) up to 350 containers per minute
- Fixed delay and speed compensated modes
- Simple, intuitive controls (Siemens PLC)
- Keyed fittings for easy installation
- 100% compatibility with Cryotech's SoftDose technology for hot-fill applications

UltraDoser SC350 System Specifications

Materials

Stainless Steel Series 300

UltraDoser Weight

32 pounds (14.5kg)

Body Dimensions

30" (762mm) H x 6.0" (152.4mm) W

Dosing Head Dimensions

9.5" (241mm) H x 2.0" (50.8mm) W

Controller Dimensions

5.5" (129.7) x 8.25" (209.6mm) x 11.25" (292.1mm)

Controller Weight

10.5 lbs (4.8 kg)

Dosing Range

Min 0.01 – Max 20 g/sec

Accuracy

+/- 5% of dose volume

Timing range

up to 500 ms in 1 ms intervals

Nozzles

0.040" installed, 0.050" and 0.060" shipped with unit. Max nozzle size 0.120"

Arm Reach

18" (457mm)

Head Pressure

0.4 psig

System Utilities

Liquid Nitrogen:

3 – 22 psig (0.2 – 1.5 BAR)
(10 micron filter provided)

Gaseous Nitrogen:

60 – 100 psig (4.1 – 6.9 BAR)

Electricity:

100 – 240 VAC, 50/60 HZ, 110 W

Internal Control: 24 VDC

Steady State Consumption

4 cubic feet per hour of N₂ plus dewar connection loss (0-300 cfh)

Production Certifications

NEMA 4X, IP 65 Controls, CE



Advantages

- The UltraDoser SC350 ensures accurate, precise dosing by delivering pure LN₂ at a constant pressure for an exact dose duration.
- Durable electrical components including a dosing head heater, vent heater, container sensor, solenoid valve, and valve confirmation sensor are modular in design for easy maintenance.
- Easy to use controller facilitates set-up procedures.
- Vacuum jacket technology prevents premature boil-off and eliminates the need for "blow-down" valves.
- Discrete dosing at line speeds up to 350 containers per minute minimizes LN₂ waste and associated downtime.
- Exact dose control ensures safe line operation and avoids costly line jam-ups.

Cost-Savings

One customer reported a 56% reduction in LN₂ costs with a Cryotech LN₂ injection unit. Contact Cryotech for a customized cost-savings assessment of your production line.



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