CRYOTECH INTERNATIONAL

SPECIALISTS IN CRYOGENIC EQUIPMENT

UltraDoser™ AB1500

Medium to high speed LN_2 dosing system for pressurization and inerting. Advanced capabilities optimize line performance. Features Allen Bradley based controls.

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

The UltraDoser AB1500 is the ideal general purpose liquid nitrogen (LN_2) 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 AB1500 dispenses a measured dose of LN_2. Once the LN_2 (-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 AB1500 has the following features:

- Sealed, vacuum insulation for frost-free operation
- Consistent, accurate dosing over all line speeds
- Rigid arm to facilitate installation
- Compact footprint
- Pulse/discrete and steady stream modes
- User defined changeover point between discrete and continuous modes
- Fixed delay and speed compensated modes
- Pulse mode up to 1200 cpm for PET and 1800 for cans
- Rockwell Allen Bradley based PLC
- Recipe storage
- Multiple language capabilities
- Encoder compatible
- Self monitoring system
- Remote container sensor location
- Electronic dose targeting
- 100% compatibility with Cryotech's SoftDose technology for hot-fill applications

UltraDoser AB1500 System Specifications

Materials
Stainless Steel Series 300

UltraDoser AB1500 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 Weight
22.5 lbs (10.2 kg)

Controller Dimensions
8.5" (215.9mm) x 11" (279.4mm) x 20" (508mm)

Arm Reach
18" (457mm)

Dosing Range
Min. 0.1 - Max 12 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"

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 (4.2 – 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 ensures accurate, precise dosing by delivering pure LN_2 at a constant pressure for an exact dose duration.
- Durable electrical components including a dosing head heater, vent heater, container sensor, pocket sensor, solenoid valve, and valve confirmation sensor are modular in design for easy maintenance.
- Easy to use PLC based controller facilitates set-up procedures.
- Vacuum jacket technology prevents premature boil-off and eliminates the need for "blow-down" valves.
- Discrete dosing at high line speeds minimizes LN_2 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 LN_2 costs with a Cryotech LN_2 injection unit. Contact Cryotech for a customized cost-savings assessment of your production line.

CRYOTECH INTERNATIONAL

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