



**CRYOTECH**  
INTERNATIONAL

SPECIALISTS IN CRYOGENIC EQUIPMENT



# CryoDoser<sup>TM</sup> AB1500

Medium to high speed LN<sub>2</sub> 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 CryoDoser AB1500 is the premier, high-speed liquid nitrogen (LN<sub>2</sub>) 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 CryoDoser AB1500 dispenses a measured dose of LN<sub>2</sub>. Once the LN<sub>2</sub> (-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 CryoDoser AB1500 has the following features:

- Sealed, vacuum insulation for frost-free operation
- Consistent, accurate dosing over all line speeds
- Flexible arm accommodates multiple stand locations
- Flexible arm allows head to be tilted as necessary
- 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
- Arm support allows support cables to be passed through for cleaner, neater installation
- Quick Service automatic defrost system
- Remote container sensor location
- Electronic dose targeting
- 100% compatible with Cryotech's SoftDose technology for hot-fill applications

## CryoDoser AB1500 System Specifications

### Materials

Stainless Steel Series 300

### CryoDoser AB1500 Weight

38 lbs (17 kg)

### Body Dimensions

28.5" (724 mm) H x 6" (152 mm) W

### Arm Length

29" (740 mm)

### Dosing Head Dimensions

9.8" (249 mm) H x 2.0" (51mm) W

### CryoDoser AB1500 Controller

Weight: 22.5 lbs (10.3 kg)

### Controller Dimensions

8.5" (216mm) x 11" (279mm) x 20" (508mm)

### Dosing Range

Min. 0.1 – 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"

### Head Pressure

0.9 psig.

### CL of stand to CL of dosing head

33" (838 mm)

### System Utilities

Liquid Nitrogen:

3 - 22 psi (0.2 - 1.5 BAR)

(10 micron filter provided)

Gaseous Nitrogen:

60-100 psig (4.2 - 6.8 BAR)

Electricity:

100 - 240 VAC, 50/60 Hz, 110 W

Internal Control: 24 VDC

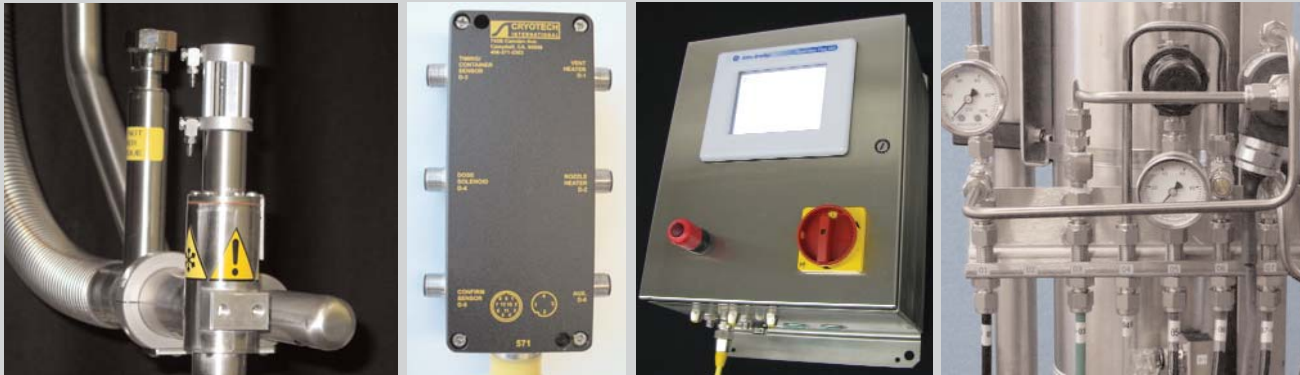
### Steady State Consumption

4 cubic feet per hour of N<sub>2</sub> plus dewar connection

loss (0 - 300 cfh)

### Certifications

NEMA 4X IP 65 Controls/CE



### Advantages

- The CryoDoser AB1500 ensures accurate, precise dosing by delivering pure LN<sub>2</sub> 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.
- Quick Service automatic defrost, eliminates most freeze ups in less than 10 minutes.
- Flexible dosing arm allows the dosing head to be installed at an angle.
- Easy to use PLC based controller facilitates set-up procedures.
- Vacuum jacket technology prevents premature boiloff and eliminates the need for "blow-down" valves.
- Discrete dosing at high line speeds minimizes LN<sub>2</sub> 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<sub>2</sub> costs with a Cryotech LN<sub>2</sub> injection unit. Contact Cryotech for a customized cost-savings assessment of your production line.



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