



# IntroDoser™

**Semi-automatic, low speed, introductory LN<sub>2</sub> dosing system used for pressurization and inerting applications. Straightforward controller features Siemens PLC.**



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

The IntroDoser is the ideal introductory liquid nitrogen (LN<sub>2</sub>) dosing system. Designed specifically for product testing purposes, pilot facilities and infrequent, low speed production runs, the IntroDoser offers precise, affordable dosing.

Typically installed after the filler and before the capper/sealer, the IntroDoser 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 IntroDoser's semi-automatic operation requires manual filling of the 3 liter reservoir. Once prepared for production, the IntroDoser operation is completely automatic. A system sensor detects the presence of a container and delivers a dose of LN<sub>2</sub>.

The IntroDoser has the following features:

- Sealed, vacuum insulation for efficient LN<sub>2</sub> handling
- An easy to remove Delrin fill cap safely covers the LN<sub>2</sub> reservoir during production operations.
- Consistent, accurate dosing
- Rigid arm facilitates installation
- Compact footprint
- Automatic discrete dosing up to 150 containers per minute
- Ideal for steady low-speed lines
- Programmable dose duration (in 10 ms intervals)
- Cryogenic transfer hose (optional vacuum jacketed) with sintered metal diffuser simplifies reservoir filling
- Optional foot pedal to replace container sensor

## IntroDoser System Specifications

### Materials

Stainless Steel Series 300

### IntroDoser Weight

26 pounds (11.8kg)

### Body Dimensions

24" (609.6mm) H x 6.0" (152.4mm) W

### Dosing Head Dimensions

9.5" (241mm) H x 2.0" (51mm) W

### Controller Dimensions

5.5" x 8.25" x 11.25"

129.7mm x 209.6mm x 292.1mm

### Controller Weight

10.5 lbs (4.8 kg)

### Dosing Range

Min. 0.1 - Max 12 g/sec

### Timing range

up to 500 ms in 10 ms intervals

### Nozzles

0.040" installed.

Max nozzle size 0.120"

### Arm Reach

12" (304.8mm)

### System Utilities

CDA Pressure:

Max 60 psig (4.1BAR)

Electricity:

100 – 240 VAC, 50/60 HZ, 110 W

Internal Control: 24 VDC

### Production Certifications

NEMA 4



### Advantages

- Durable electrical components include a dosing head heater, a container sensor, and a solenoid valve.
  - Easy to use controller facilitates operations.
  - Vacuum jacketed reservoir minimizes LN<sub>2</sub> losses.
  - A 6' non-vj fill hose equipped with a sintered metal diffuser facilitates the manual filling of the reservoir.
  - Optional foot pedal is ideal for non-automated production lines and manual dosing.
  - Our highly experienced service and installation technicians ensure safe, efficient system start-up. We also provide hands-on training for long-term, trouble free operations.
- Cryotech provides a complete range of LN<sub>2</sub> dosers. When your company is ready to scale up production, Cryotech will be there with the experience, know-how and technologically advanced equipment you'll need to maximize line performance.

### Cryotech Advantage

Cryotech provides value-added insight to your production operations. Our project engineers have a wealth of practical LN<sub>2</sub> dosing knowledge from hot-fill PET to ultra-light weight bottles, glass bottles, aluminum cans, custom shaped PET bottles, aluminum tubes, and glass to plastic conversions. We also have experience with a wide variety of products from water to wine; peanuts to pie filling; and ice cream to iced tea.



Visit our website at: [www.cryotechinternational.com](http://www.cryotechinternational.com)

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