CryoDoser FleX® Liquid Nitrogen Dosing

The CryoDoser FleX® Liquid Nitrogen Dosing System is the first doser with the ability to serve every dosing application within one unit. Chart Inc. has designed a brand new dosing system that can be used from the slowest production lines to the fastest. The most efficient dosing system to date, the CryoDoser FleX system is the only liquid nitrogen doser you need. With more standard functions than any other doser offered before, the CryoDoser FleX system is ready to change the market.

Features

- **Compact Size** – enables installation in limited spaces

- **Discrete Dosing** – Craft Custom (750 cpm)

- **SoftDose™ Compatible** – Chart's proven technology for hot fill, powder and granular applications

- **Dynamic Dose** – Up to 16 containers each with different dose duration

- **Reset Timer** - Reset each series back to one in case of line stoppage

- **Warranty** – four (4) year vacuum warranty; highest in the industry one (1) year controller warranty

CryoDoser FleX Craft Custom

LN₂

How it Works

LN_2 is supplied to the CryoDoser FleX unit by a vacuum insulated hose and flows into the dosing head. A sensor detects the speed of the line (encoder compatible); a second sensor detects the presence of a container. When a container is detected, the dosing head opens and dispenses an exact amount of pure LN_2. A PLC (Programmable Logic Controller) is the brains behind integrating the sensors and controls via a touch-screen HMI (Human Machine Interface) display.
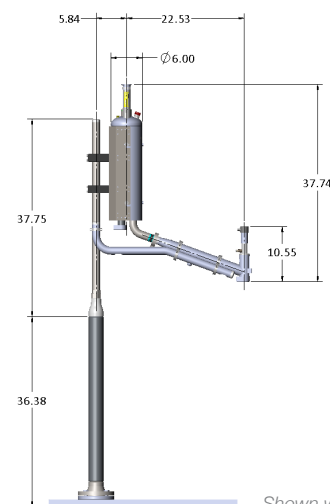
Key Benefits

- **Lightweight PET** – reduce the weight of PET for cost and environmental savings
- **Glass to PET Transition** – eliminate glass safety hazards and weight of containers
- **Container Rigidity** – maintain 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 container 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

CHART®

CryoDoser FleX® Technical Specifications

Materials	All 316L Stainless Steel
Weight	33 lbs (15 kg)
Body Dimensions	21"H x 6.5"W (533.4 x 165 mm)
Dosing Head Dimensions	DoserEASE = 11"H (279 mm)
Arm Reach	12.5" to 20.5" (317.5 to 520.7 mm)
Head Pressure	0.34 psi (0.023 bar)
Nozzles	Ships with 3 Standard Nozzles: 0.020" - 0.100" (0.005" increments) available
System Utilities	**Liquid Nitrogen**: 3 - 100 psi (125 psi MAWP / 0.2 - 7 bar) **Gaseous Nitrogen**: 60 - 80 psi (4.1- 5.2 bar) for Purge **Electricity**: 110 - 240VAC; 50/60Hz, 110W
Steady State Consumption	0.035 gal (0.13 liters) / hour
Vacuum Insulated	Yes
Interchangeable Arms	Yes
Fill Level Adjustment	Yes

CryoDoser FleX® Dimensions

Shown with EDS

Controller Technical Specifications

Model	Craft Custom
PLC Platform	Siemens S7-1200
Display	4.3" (109 mm) TFT Color LCD Touch Screen
Dose Actuator	DoserEASE
Dose Duration min/max	35 ms to Unlimited
Dose Duration Resolution	1 ms
Minimum Dose Volume	0.002 grams/dose
Discrete Dosing cpm (cph) min/max	30 to 750* (1800 to 45,000)
Container Detection	✓
Fixed Delay Mode w/ Step	✓
Repeatability	± 2% of dose
MicroDose™ Technology	✓
User USB Interface	✓
Recipe Storage	4
Liquid Level Control	✓
Liquid Supply Pressure psi (bar)	3 to 100 (125 MAWP) / (0.2 to 7)
Standard Purge	✓
ThermoPurge	Standard
Certifications	UL, CE, IP67, NEMA Type 4
Dynamic Dose Capability	✓
Interval Reset Timer	✓

* Results achieved at Chart laboratory conditions. ** Access to the internal network is necessary for this function.

Your Local Representative