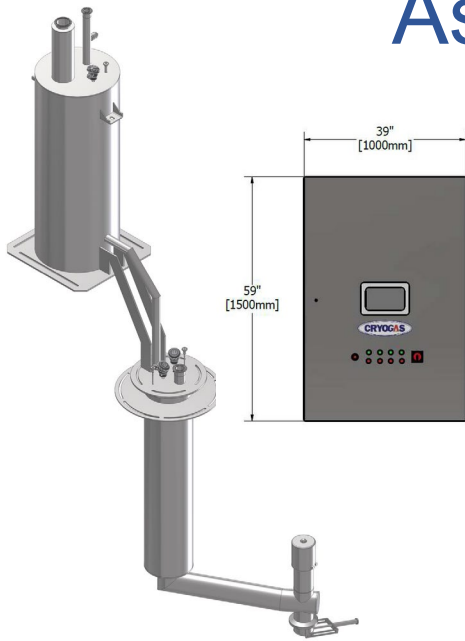


Aseptic NovoDoser®



A sterile, low pressure liquid nitrogen doser that provides rapid sterilization. Available in either wet steam or dry heat sterilization. Comes with frost-free operation, stainless steel 316L pharma-grade material construction. Equipped with single or redundant 0.2 micron gas filters for efficient dosing of aseptic filling lines, from low to high production line speeds.

Applications

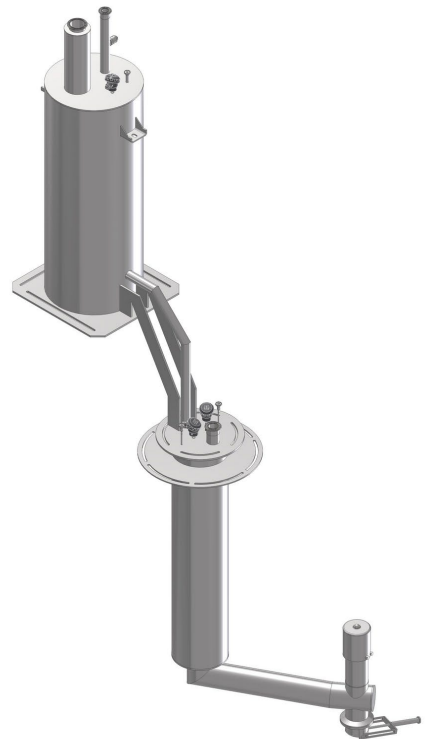
- **Container Rigidity** – enhance bottle or can’s strength and eliminate paneling especially in hot filling process
- **Container Light-weighting** – reduce packaging cost and environmental carbon footprint
- **Oxygen Exclusion** – Reduce residual oxygen in product headspace to prevent oxidation to the product
- **Extend Product Shelf Life** – N₂ in product packaging can extend product shelf life longer

Ergonomic Features and Benefits

- **Sterile and Low-Pressure Dosing:** The Aseptic LN₂ Doser offers aseptic and low-pressure liquid nitrogen dosing, making it ideal for a variety of industries, including pharmaceuticals, biotechnology, and food processing.
- **Continuous Stream Dosing:** Designed to run in a continuous dose mode, the Aseptic LN₂ Doser provides a constant stream of liquid nitrogen for uninterrupted dosing operations, ensuring optimal efficiency.
- **Precise Dosage Control:** With an accuracy of $\pm 3\%$ in dose weight, the system ensures consistent and precise dosing, reducing waste and improving overall product quality.
- **Self-Monitoring and Alarm Outputs:** The system features continuous self-monitoring, providing real-time data to operators and alerting them in case of any deviations or irregularities through alarm outputs and visual beacon indicators.
- **User-Friendly PLC Platform:** CSM Aseptic LN₂ Doser is equipped with a Siemens S7-1200 PLC platform, offering intuitive and efficient control over the dosing process, ensuring ease of operation and quick setup.
- **User Interface:** The system is complemented with a Siemens 6” color touchscreen, providing operators with a user-friendly and informative interface for convenient control and monitoring.
- **Automatic sterilization & sanitization:** The Aseptic system is equipped with steam, hot gas, chemical sterilization & sanitization process. The entire process steps are programmed with automatic sequence to ease the operation. The process data are logged, monitored and validated by proprietary algorithm to ensure compliance.
- **Automatic CIP Protection:** The Aseptic LN₂ Doser is equipped with CIP (Clean-in-Place) process. This feature prevents moisture from entering the dosing head, minimizing the risk of freeze-ups and ensuring a smooth and hassle-free cleaning process. The doser system is designed to withstand high-pressure washdowns and aggressive chemical cleanups, ensuring its longevity and reliability.

Aseptic NovoDoser® Dimensions

Material	Stainless Steel Series 316L
Head Pressure	0.3psi
Nozzle Blanketing	Self Generated N2
Steady State Consumption	< 0.03 gal (0.1 liter) / hour
Body Dimension	Customized to filler
Dosing Head Dimension	Aseptic Head 9.5"H x 2"W (241 x 50mm)
Dosing Head Arm Reach	Customized to filler
Weight	Approx 170lbs (80 kg)
Utilities	Liquid Nitrogen : ≤ 100 psi Gaseous N2 : 60 - 100 psi Electrical : 110-220VAC



3001DSC Controller Specifications

PLC Platform	Siemens S7-1200
HMI (LCD touch screen)	7.0" Color
Dose Duration, 1ms int.	5 to 1000 ms
Dose Volume, mg/dose	5 to 1400
Dose Accuracy	± 3%
Max. Discrete Dosing	2000 CPM
Fixed Delay	✓
Speed Compensation	✓
Dose Compensation	✓
Encoder Compatible	✓
Nozzle Pre-Cooling	✓
Chemomatic Sanitization	✓
Thermomatic Sterilization	✓
Nozzle Auto Defrost	✓
User Signal Interface	✓
Modbus User Interface	✓
Ethernet User Interface	✓
Smart Maintenance	✓
Recipe Storage	unlimited
AS Aseptic Dosing Head	✓
Certifications	CE, IP65

