

NovoDoser®

L series



The new generation of high-performance liquid nitrogen dosing. Designed with three controller options to accommodate diverse dosing needs, it delivers 0.3 psi dosing pressure with exceptional accuracy and operational excellence with 5 years vacuum warranty.

Specifications

- LN₂ inlet pressure up to 100 psi (6.8 bar)
- Integrated inlet safety relief valve 150 psi (10.3 bar)
- Discrete dose is 1200 CPM max *, continuous dose 2000 CPM
- Minimum dose duration 5 ms **
- Dosing pressure 0.3 psi
- Dose accuracy +/- 2%
- Electrical dosing valve, IP67 rated
- Dose Timing Synchronization *
- Dose Volume Synchronization *
- Rapid nozzle defrost
- Quick System Purging, Dry down & Warm-up
- Dynamic dose settings allow up to 12 configurations for both dose duration and dose delay
- Recipe storage up to 12 recipes *
- Multi-lingual HMI: English (US/UK), German, Spanish, Chinese, etc.
- Controller with Siemens S7-1200 PLC, TFT color touchscreen HMI, NEMA 4X IP65-rated stainless steel enclosure

* Controller specific

** Actuator specific - 25 ms for electric valve, 10 ms for electro-pneumatic valve, 5 ms for High Speed Servo Actuator

Ergonomic Features and Benefits

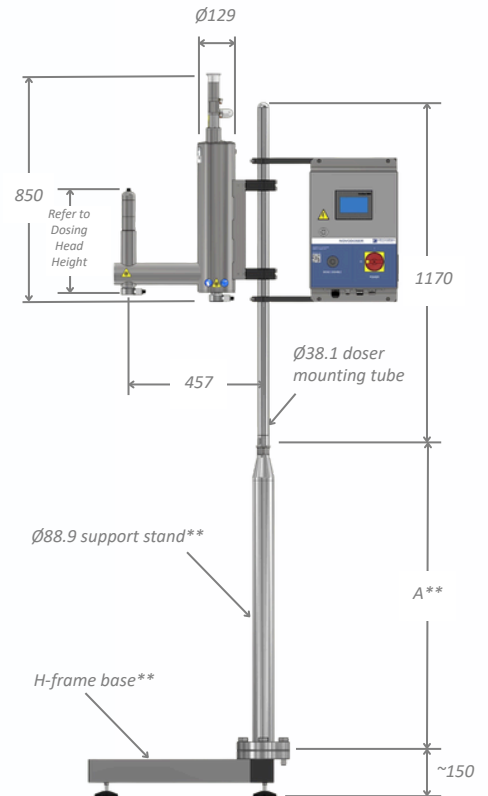
- **Frost-free Nozzle** – Self-generating GN₂ for dosing head blanketing
- **Lowest Dosing Pressure** – Eliminate product splashing during dosing
- **Lowest LN₂ Losses** – Proprietary vacuum insulation with lowest heat leak 0.1 LPH
- **High Dosing Speed** – Lower dose pressure in its class, 0.3 psi
- **Sub-cooled LN₂** – Ensuring constant LN₂ density for accurate and repeatable dosing
- **Corrosion Resistant** – Stainless steel 300 series material grade
- **Highest Hygiene Design** – All external surface has rounded corners and sloped design for easy wash-down
- **Lowest Maintenance** – Ultra-long life cycle dosing valve, tested 60 million
- **Ease of Installation** – Compact size for easy installation in limited space
- **Applications Flexibility** – Compatible with soft-dose and micro-dose technology for hot fill, powder, and granular applications
- **5 Years Vacuum Warranty** – Lowest cost of ownership

NovoDoser® L series Dimensions

Material	Stainless Steel 300 series *
Head Pressure	0.3 psi
Nozzle Blanketing	Self-Generated N ₂
Steady State Consumption	< 0.026 gal (0.10 L) / hr
Body Dimension	33.5" H x 5" W (850 H x 129 W mm)
Dosing Head Dimension	<p><u>Electric (EA Head)</u> 13.8" H x 2.3" W (351.5 H x 57 W mm)</p> <p><u>Electro-pneumatic (HS Head)</u> 14" H x 2.5" W (354 H x 63.5 W mm)</p> <p><u>Servo Electric (ES Head)</u> 21" H x 3.1" W (534.6 H x 78 W mm)</p>
Dosing Head Arm Reach	18" (457 mm)
Weight	30 lbs (14 kg)
Utilities	<p>Liquid Nitrogen LN₂ : ≤ 100 psi</p> <p>Gaseous Nitrogen GN₂ : 100 psi</p> <p>Electrical: 110-240 VAC</p>

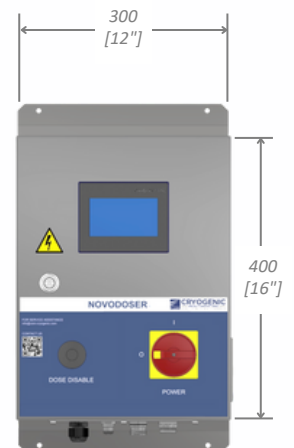
* SS316/316L for external material

** H-frame base and Ø88.9 support stand are available as options, customer to provide "A" dimension when ordering.



Controller Specifications

Model	250FD	500SC	1000DSC-X
PLC Platform	Siemens S7-1200		
HMI (LCD touchscreen)	4.3" Color	7.0" Color	7.0" Color
Dose Duration, 1 ms interval	25 to 1500 ms	10 to 1500 ms	5 to 1500 ms
Dose Volume, mg/dose	15 to 1400	10 to 1400	5 to 1400
Dose Accuracy	± 3%	± 2%	± 2%
Max. Discrete Dosing	500 CPM	1000 CPM	2000 CPM
Continuous Dosing Line Speed	2000 CPM		
Dynamic Dose	✓		
Fixed Delay	✓	✓	✓
Dose Timing Synchronization		✓	✓
Dose Volume Synchronization		✓	✓
Encoder Compatible			✓
Thermo-Purging			
- Quick System Purging	✓	✓	✓
- Rapid Nozzle Defrosting			
- CIP Protection			
Nozzle Pre-Cooling	Manual	Auto	Auto
Filler Command Signal	✓	✓	✓
Filler Signal Exchange			✓
Modbus RTU User Interface	✓	✓	✓
Standard Actuator / Optional	Electric (EA)	Electric (EA) / Pneumatic (HS)	Pneumatic (HS) / Servo (ES)
Recipe Storage	5	5	12
Certifications	CE		



*500 mm (19.7") H x 400 mm (16") W for 1000DSC-X

All dimensions provided are for indication purposes only and may not accurately represent the actual product dimensions. Please contact us for updated and actual measurements.