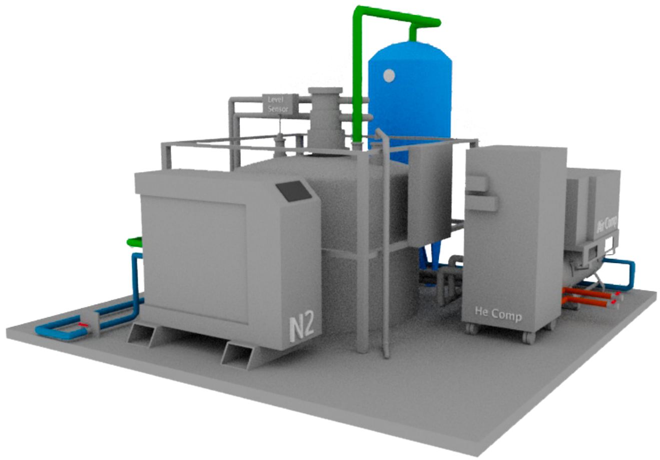
N2 CRYO

Reliable, safe and plug-and-play supply for your cryogenic needs

Liquid nitrogen finds its applications across a spectrum of industries, from medical and scientific research to metal treatment and dermatology where ultra-low temperatures are critical. However, handling dewars of liquid Nitrogen can be challenging, with safety risks, logistical hassles, and purity concerns.

The solution? On-site, on-demand liquid Nitrogen production. The N2 CRYO allows you to generate your own liquid Nitrogen—anytime, anywhere! Just connect it to a power supply, press start, and produce 8 up to 960 liters per day automatically.



N2 CRYO Models for 8-80 L/Day

N2 CRYO Skid for 130-960 L/Day

Take control of your cryogenic production costs!

An on-site generator is the best practical, secured and cost-effective alternative to dewars or bulk storage of liquid nitrogen. Traditional sources of LN2 incur on-going delivery, administrative and rental costs, all of which have an impact on business revenue or facility budgets.

Thanks to our system, you will be completely independant from a third party supply!

Key Features

Why choose a Liquid Nitrogen Generator?

On-Demand Production

Generate liquid Nitrogen on-demand from ambient air.

Convenience

Eliminate the inconvenience from delivery delays and reliance on external suppliers.

Flexible Output

Produce 8 up to 960 L/Day (higher capacities available).

High-purity LN_2

Produce liquid Nitrogen with 99% purity (Oxygen < 1%).

Remote control

Monitor and control via USB or internet access.

Low maintenance

Require minimal servicing and ensure maximum uptime.

Economical Performance

On-site generation is cost-effective and delivers a fast return on investment.

Safe Operation

Designed with a robust cabinet, certified built-in dewar, safety valves, and advanced electronics for secure use.

Easy to operate and dispense

Control via intelligent, intuitive touch screen to start/stop, monitor real-time process, set all parameters and schedule maintenance. Use the insulated cryogenic hose to easily dispense the liquid Nitrogen once the built-in dewar is filled.

Energy efficient & sustainable

Automatically switches to economy mode when not in use, reducing energy consumption, while sustainable on-site production eliminates the need for truck deliveries.

O_2 analyser with alarm

Built-in Oxygen sensor alerts the staff when Oxygen levels become critical.

Just plug in, press start, and the N2 CRYO automatically generates liquid Nitrogen ***on-demand!***

On-demand Liquid Nitrogen generation

The liquid Nitrogen generation process of the N2 CRYO starts with producing Nitrogen gas from ambient air, cooling and liquefaction, and ends with dispensing liquid Nitrogen directly from a built-in dewar.

As standard, our generators feature a fully automated system, combining oil-free air compression, PSA Nitrogen generation, cryo-cooling, and Helium compression. The helium compressor can be cooled using two primary methods: water cooling or air cooling.

The most reliable, efficient and proven technology available

At the core of the N2 CRYO Liquid Nitrogen generator lies the **Gifford-McMahon technique**, which uses a cold-head design to compress and expand Helium, achieving low temperature cooling of the gaseous Nitrogen.

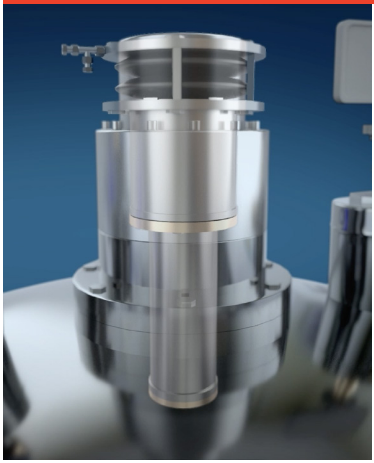
Easy Dispensing of Liquid Nitrogen

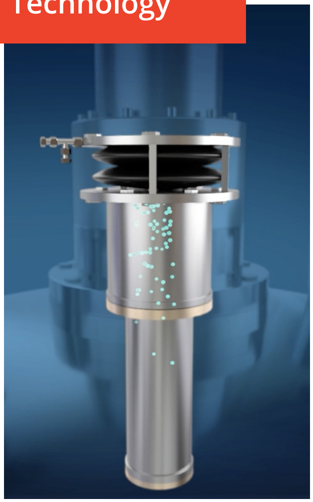
A Cryo-Refrigerator mounted on the built-in dewar converts the generated gaseous Nitrogen into liquid Nitrogen at –196°C (-321°F). The cooling of the N2 CRYO system is possible either by Air or Water depending on your cryogenic requirements.

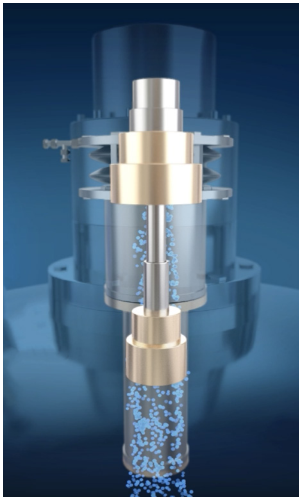
The liquefied Nitrogen drops down into a built-in certified dewar and can be dispensed easily through an insulated cryogenic hose. A dedicated sensor monitors the produced liquid Nitrogen levels, and the touch screen control allows real-time process management and liquid level monitoring. It also gives access to the service menu to check the running hours, schedule maintenance or review the logged events. Remote operation is possible via USB or internet connectivity.

The N2 CRYO system **delivers from 8 L/day up to 960 L/day** to meet the needs of most applications requiring liquid Nitrogen. Higher capacities available upon request.

Reliable Gifford-McMahon Technology

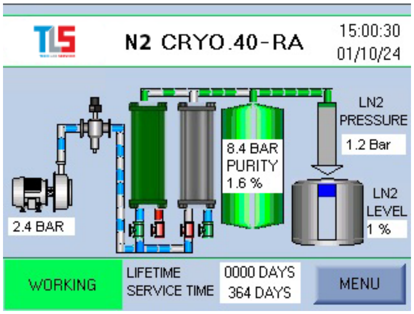






Control N2 CRYO via user-friendly touchscreen to start, monitor and set all parameters

The in-house developed software ensures full control for easy upgrades. It offers a user-friendly interface displaying all vital parameters (N2 flow rate, pressure, purity, LN2 production %, air inlet pressure, operating hours, date, time) and system status (operation, service alarm, economy, shutdown mode).



Water cooled Liquid Nitrogen Generator with Helium compressor

	Max L/Day	Max L/Hour	LN2 Dewar Capacity	LN2 Pressure	Power Consumption	Dimensions	Cooling Water requirement	Air Comp.	Electrical supply
N2.CRYO.20	20	0.84	60 L	Up to 1.5 bar*	4.2 kW	1	4.5 kW	0.6 kW	Type B or C
N2.CRYO.20+	20	0.84	210 L		4.2 kW	2	4.5 kW	0.6 kW	
N2.CRYO.30	30	1.25	210 L		4.2 kW	3	5.0 kW	1.2 kW	
N2.CRYO.40	40	1.67	210 L		4.2 kW	3	5.0 kW	1.2 kW	
N2.CRYO.65	65	2.7	210 L		6.9 kW	4	7.2 kW	1.2 kW	
N2.CRYO.80	80	3.33	210 L		6.9 kW	4	7.2 kW	1.2 kW	
N2.CRYO.130	130	5.42	300 L		13.8 kW	6	13.8 kW	4.0 kW	
N2.CRYO.240	240	10	500 L		13.8 kW	7	13.8 kW	4.0 kW	
N2.CRYO.480	480	20	1000 L		27.6 kW	8	30 kW	7.5 kW	
N2.CRYO.720	720	30	1000 L		41 kW	8	42 kW	7.5 kW	
N2.CRYO.960	960	40	2000 L		55 kW	9	55 kW	13.5 kW	

Air cooled Liquid Nitrogen Generator with Helium compressor

	Max L/Day	Max L/Hour	LN2 Dewar Capacity	LN2 Pressure	Power Consumption	Dimensions	Electrical supply
N2.CRYO.FLASK.08-RA	8	0.33	60 L	Up to 1.5 bar*	1.3 kW	1	Type A
N2.CRYO.10-RA	10	0.41	60 L		1.3 kW	1	
N2.CRYO.16-RA	16	0.66	60 L		2.7 kW	1	
N2.CRYO.20-RA	20	0.84	60 L		4.2 kW	2	Type B or C
N2.CRYO.30-RA	30	1.25	210 L		4.2 kW	3	
N2.CRYO.40-RA	40	1.67	210 L		4.2 kW	3	
N2.CRYO.65-RA	65	2.70	210 L		6.9 kW	5	
N2.CRYO.80-RA	80	3.34	210 L		6.9 kW	5	

N2 Cryo production rate at + 25°C and < 2000 meters altitude at 50Hz.
* boost mode up to 4 bar to increase liquid N2 production.

Helium Compressor Cooling

The difference lies in the method used to dissipate the heat generated during the liquefaction process.

A water-cooled system uses a water circuit to absorb heat through a heat exchanger. The heated water is then cooled in an external system. This type of cooling is more efficient in hot environments. Chiller system in option.
An air-cooled system uses fans to circulate air around a heat exchanger to dissipate the heat into the atmosphere. This method is simpler to install and does not require water, but it is less efficient in hot environments.
The choice depends on the environment, performance, and installation constraints: water-cooled systems offer optimal efficiency, while air-cooled systems suit simpler installations or areas with limited water access.

OTHER SPECIFICATIONS		
Liquid N_2 Purity		> 99% (< 1% O2)
Built-in O_2 analyser with alarm		Yes
Temperature range		7 - 25°C (45 - 77°F)
Type of Electrical supply	A	100 - 240 V ac / 1 ph + neutral and earth / 50 - 60 Hz
	B	200 V ac / 3 ph + neutral and earth / 50 - 60 Hz
	C	380 - 440 V ac / 3 ph + neutral and earth / 50 - 60 Hz
Noise level		Between 52 and 65 dBA (depends models)
USB/PC Control		In series

DIMENSIONS & WEIGHT			
Type	N°	W x H x D	kg / lbs
1 door cabinet on wheels	1	80 x 196 x 80 cm (31" x 77" x31")	320 / 705
2 doors cabinet on wheels	2	180 x 196 x 80 cm (71" x 77" x 31")	450 / 992
2 doors cabinet on wheels	3	180 x 196 x 80 cm (71" x 77" x 31")	506 / 1115
2 doors cabinet on wheels	4	180 x 196 x 80 cm (71» x 77» x 31»)	600 / 1322
2 doors cabinet on wheels with remote cooling unit	5	180 x 196 x 80 cm (71" x 77" x 31") + unit 100 x 95 x 34 cm	600 / 1322 (unit 120 / 264)
Skid platform (without chiller & comp.)	6	200 x 170 x 200 cm (78.7" x 67" x 78.7")	1250 / 2755.7
Skid platform (without chiller & comp.)	7	160 x 180 x 280 cm (63" x 70.8" x 110")	1770 / 3902
Skid platform (without chiller & comp.)	8	200 x 250 x 300 cm (78.7" x 98" x 118")	2500 / 5511.5
Skid platform (without chiller & comp.)	9	200 x 250 x 300 cm (78.7" x 98" x 118")	3000 / 6613.8