



NL280 Liquid Nitrogen Generator

Assembled and tested Liquid Nitrogen Generators are fully automatic producing LN₂ 24-7 without operator intervention. A 120 liter vacuum insulated tank stores the daily production of 50 liters. An oil-free scroll air compressor and PSA GN₂ Generator are integrated on a platform. Touch Screen (HMI) and PLC controls provide for reliable and safe operation. With the push of a button, LN₂ is delivered to the customer's tank and **as easy as decanting tap water**.

Specifications

- Storage Capacity: 120 liters (ASME Tank Option)
- Peak Production: 55 liters per day
- Standard Production: 50 lpd at 60 Hz
- Purity: >99% with 99.9%, peak
- Dimensions: 183^W 100^D 146^H cm
- Empty Weight: 470 kg
- Environment: Indoor
- Certifications: CE, ASME Sec, VIII

Utilities

- Cooling Water: 6 lpm at 2 barg
- Air Cooling : Optional
- Power for USA: 208 VAC, 3 ϕ , 60 Hz, 125A
- Power for International: 400 VAC, 3 ϕ , 50 Hz, 65A

Options

- Air Cooling: 45° C or for High Elevations
- V.J. Transfer Line: 3.0 meter long
- On-Site Installation: By KIC Service Engineers



Features

- Controls: PLC and Touch Screen
- Operation: One-button with Auto-Start
- Controls: Fully Automatic
- Monitoring: Remote PC via Internet
- Warranty: One Year from Installation
- Extended Warranty: Life on Software & Instruments
- Reliability: Triple Redundancy
- Air Compressor: Dry Scroll Type

Applications

- Mining and Off-Shore Platforms
- NMR, Chemistry Labs
- Bovine AI Stations
- Biological Storage and Preparation
- Temporary Labs
- University and Research Centers
- Forensics and Dermatology

Many options and features are available to meet the customer's application and environmental conditions. Please consult with the KIC engineers regarding previous experience and custom designs.

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NL280 Liquid Nitrogen Generator—Product Specifications

Feature	Specifications
NL280	50 lpd Integrated LN2 Generator on roll-around casters. When ordered as air-cooled, only electricity is required to operate. Completely assembled on a carbon steel skid and factory tested. Requires no field assembly.
PSA Generator	99.0 – 99.5% Purity with High Efficiency CMS beds that include a pre-dryer section to prevent moisture damage. Low voltage controls with variable timing set-points are included.
Automatic Controls	Lifetime support for all software and calibrations (since 1993) PLC controls provide fully automatic operation that include the following features using a PLC controller and Touch screen: AUTO-START feature for when power returns Digital display of internal and external tank and ALARMS Electronic level gauge for 100% automatic operation Dewar set points (start-stop) can be controlled by customer Password protected functions for user to control access Touch screen push button of LN2 delivery valve Automatic control and display of dewar pressure settings Purity venting for clean start-up of GN2 Calendar and daily operation timing for ON-OFF operation Self diagnostics on every start-up EMO Button for safety Built-in AUTO-DELIVERY of LN2 for external Dewar There is a 3-year (calendar) warranty on all electronic and electrical components Remote monitoring option for operating liquefier from any computer and able to data record operations and to data log performance and use.
Dewar	High efficiency (<.8% BOR) dewar holding 120 liters and includes venting valves, pressure transmitter, and electronic level gauges.
Refrigerator	High efficiency cryogenic refrigerator that operates continuously for 13,000 hours before maintenance. When decanting ~30 liters per day, the expected MTBM is about two-three calendar years. Helium compressor requires maintenance at 30,000 hours.
Standards	This is a CE marked product that meets Health and Safety Standards set forth in the Machinery Directive on machinery safety, 98/37/EC and the International Standards: BS EN ISO 12100-1:2003, BS EN ISO 12100-2:2003, BS EN 294:1992, BS EN 349:1998, BS EN ISO 13850:2006, BS EN 60204-1:1998, BS EN 1050:1997
Air Compressor	3HP dry scroll air compressor is the standard offering including, receiver tank, electronic drain valve, and automatic controls. For higher altitudes above 2,000 meters (asl) and for temperatures above 50 degrees C, the 5HP model is recommended.
Shipping	Wood and platform crated to meet international shipping standards with tracing documentation with certificates of performance and compliance. Electronic manual versions are included with each liquefier that include recovery software, wiring diagram, and flow schematics.