



Proactively Manage Nitrogen Inventory. Nitrogen Portable Storage Vessels Eliminate Waiting, Expand Product Availability and Reduce Total Operating Costs.



Portable Nitrogen Storage

Linde's Nitrogen Portable Storage Vessels (NPSV) deliver to the oil and gas industry high-volume nitrogen (N₂) storage at the wellsite, at the staging area or back at the service company district. NPSVs can be used for a wide variety of wellsite operations, from stimulation treatments to coiled tubing operations. Providing 16,700 gallons of storage capacity, NPSVs enhance the efficiency of Linde's nitrogen services with new options to optimize N₂ inventory management. This cost-effective storage solution significantly mitigates waiting time for nitrogen and enhances utilization of N₂ pressure pumping and hauling assets.

The Case for Nitrogen Portables

The high-volume storage of NPSVs offers numerous benefits to the customer.

- At the wellsite, these storage vessels supplement the numerous trailers that are required to remain on location to support nitrogen operations.
- NPSVs use less location footprint and personnel to perform wellsite operations than transport trailers, resulting in a significant cost reduction for the operator as well as the service company.
- NPSVs can be deployed at a staging area where the use of a low-volume nitrogen transport (straight truck) can more efficiently and safely mitigate the challenging terrain of some oil and gas operations.
- At the service company's operating base, NPSVs allow for flexibility when handling ramped up nitrogen requirements in a specific geographic region.

No Permit Required

NPSVs, because of their size, require no US Department of Transportation permits for road travel. This provides another cost- and time-savings for producers and service companies. Nitrogen portables offer a ride height of 17", making them suitable for off-road travel to remote wellheads.

Why Linde for Nitrogen

As the world's leading industrial gases company, Linde provides high-quality nitrogen on a global scale, with local service commitment. We provide energized fluids to oil and gas customers in every major basin in North America. Linde is fundamentally expanding its services for cryogenic storage, with nitrogen portable storage vessels for the district, staging area or wellsite. As an integral part of its customers' operation, Linde offers a full suite of services for inventory management. Linde Group is one of the largest private N₂ carrier in the US, with 11,000 customer installations, 40,000 deliveries per month and 70 plants and depots to service the N₂ requirements of the oil and gas industry.

Safety First There is no higher priority at Linde than the safety of people, property and the environment. Managing risks is a vital component in achieving our goal of zero accidents and achieving our vision to do no harm to people or the environment. Linde has performed comprehensive risk assessments to evaluate and determine the necessary safeguards to protect our customers, contractors and employees. These safeguards are designed into our equipment and work procedures.

Equipment Specification **Nitrogen mobile storage vessel standard equipment specification**

Equipment description
16,700-gallon nominal capacity double-walled, horizontal cylindrical, vacuum-insulated liquid nitrogen mobile customer station furnished with piping and components. Ready-to-operate product delivery, designed to AMSE and CAGE code.

Equipment specifications	
Nominal capacity	16,654 U.S. gallons
Service temperatures	-320° F
Maximum working pressure	60 psig
Length (nom)	52 feet 9 inches
Width	102 inches
Height	13 feet 3 inches
Estimated weight	37,700 lbs. ±3%
Evaporation rate	0.55% in 24 hours (lin)
Pumping Capacity	550 gpm

Talk to Linde We'll help you determine if NPSVs are the right storage solution for your operation, develop a just-in-time inventory management program and ensure adequate supply of N₂ for your operations.

Learn more at www.lindeoilandgas.com.