

Making our world more productive



additional
equipment

Liquid Ammonium Nitrate Feeding

For increased safety and cost-saving

N_2O is produced from Ammonium Nitrate (AN) with thermal decomposition. Theoretically, 2 kg AN is recommended for the production of 1 kg N_2O .

Depending on your raw material sourcing, the N_2O production unit can be fed with Liquid Ammonium Nitrate. The supply of ammonium nitrate may present a safety issue because its storage and handling may require suitable conditions. It is recommended to use LAN for higher plant capacity (100...300 kg/h) because to feed 200...600 kg AN per hour is hard physical work.

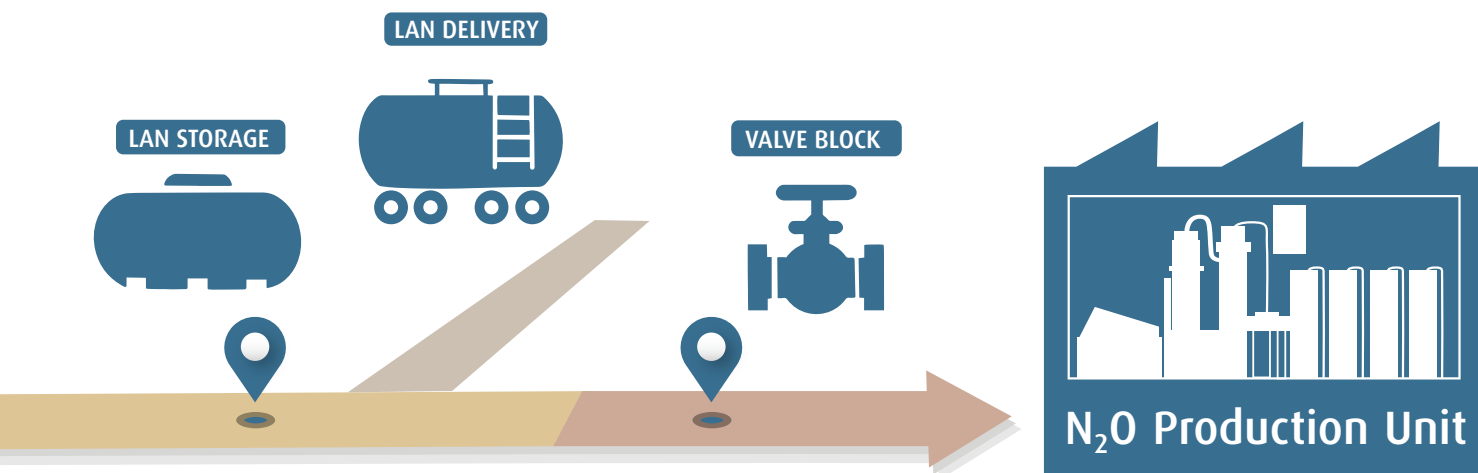
Reduced staffing, elimination of human error, safer storage and handling, smoother operation and lower power consumption of the melting unit are the advantages of LAN feeding.

Therefore, Linde introduces a modular, standardized solution for Liquid Ammonium Nitrate (LAN) storage, specifically designed for the storage of LAN and optimized directly for N_2O Production Plants.

We provide a special unit for LAN feeding, which consists of an integrated valve block, including the required mechanical and instrumental upgrades and ensuring proper and safe operation.

This unit can be installed at any manually fed plant having a LAN source.

Furthermore, valves and control instruments are integrated into the production plant if the production capacity is above 100 kg/h.



Storage tank

The Nitrous Oxide production chain can be equipped with a batch tank and/or storage tank.



LAN Delivery

Delivery of LAN from the Ammonium Nitrate supplier is possible by road tanker with the same design as the storage unit. From the Delivery unit, the AN is transferred to the storage tank by overpressure.



Valve block

It has three components: a manual valve for fine flow adjustment and two automatic valves for control and safety. The control of valves and the melting unit level is integrated into the N₂O plant control system.



LAN delivery tank



Valve block

What can we offer?

- Modular stainless-steel storage tank, with capacity from 22,500 litres up to the user requirements.
- Plant control system integration.
- Safer and easier storage of Liquid Ammonium Nitrate.
- Optional monitoring system.

Why choose us?

- High-quality parts and workmanship.
- Long term after-sales support.
- Standard size (ISO container).
- Feeding process: by gravity or by overpressure.
- Less manpower requirement (up to 80% savings).