



# GAN containerized supply solutions for gaseous and liquid nitrogen

Our GAN range is equipped with turbines to provide the cooling power required for cryogenic distillation. This results in a steady stream of gaseous nitrogen and strategic reserves of liquid nitrogen that can be stored and vaporized on demand to supplement your gaseous stream.

## Tried-and-tested solution for mission-critical gas supplies

Many industries – from oil and gas to pharmaceuticals – rely on a steady, cost-effective stream of gases such as nitrogen. Gas supply can even be a crucial enabler in developing new market opportunities. This is particularly true of the glass industry, where operators are under pressure to increase float glass capacity to supply new construction projects. Fueled by rising demand for mobile phones, the electronics industry is also challenged to increase capacity. In this sector, purity is often mission-critical – with levels of 99.9999% (1 ppm O<sub>2</sub>) and above sometimes required. For these mission-critical applications, security of supply is a key success factor – especially in remote or difficult-to-access regions.

## Reliable technology for uninterrupted operations

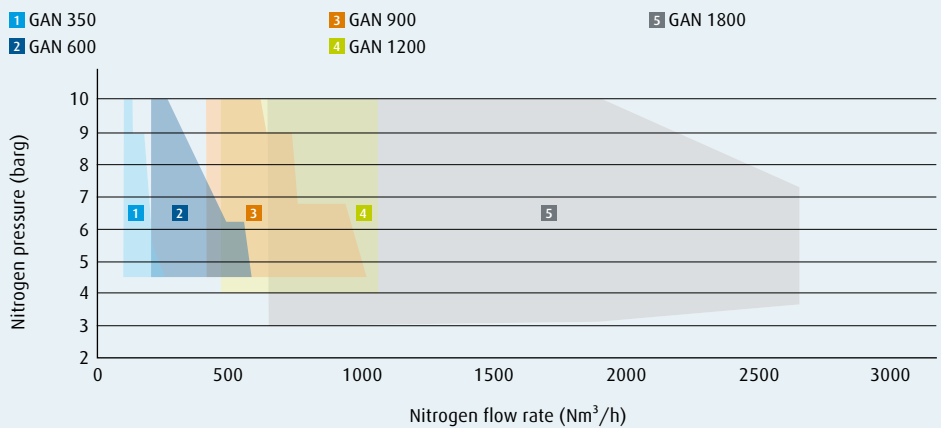
Here at Linde CryoPlants, we have developed a family of compact plants to ensure reliable, flexible supplies of gaseous and liquid nitrogen regardless of where you are located. Our GAN family leverages the latest turbine technologies to ensure non-stop, cost-efficient supplies of both liquid and gaseous nitrogen. Designed for 24x7 operations, GAN is the model of choice if high-purity nitrogen is critical to your process flow and/or road-based deliveries are not an option.

GAN plants are the ideal way to overcome the cost, logistical and availability constraints of bulk deliveries. Installed at your site, GAN puts you in control – you are no longer reliant on gas deliveries from an independent provider.

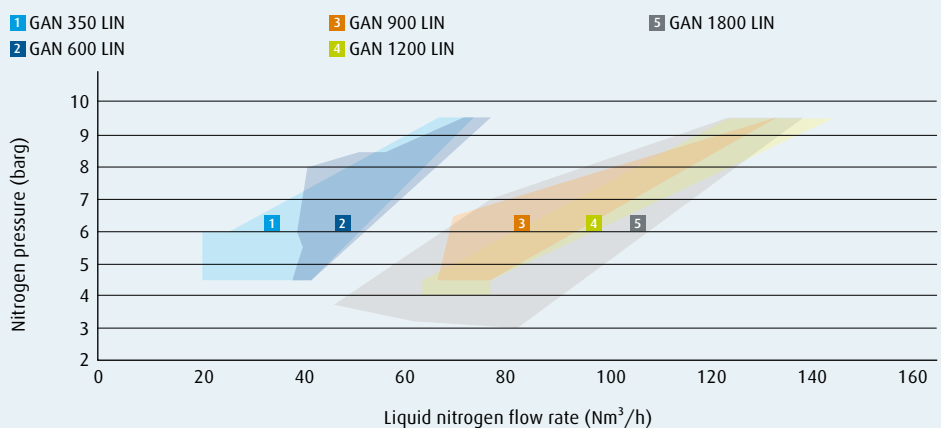
## Flexible design

Our GAN range of nitrogen plants are containerized, pre-assembled and pre-tested modular systems offering safe, reliable and

GAN 350–2500 performance envelope (indicative using 50 Hz)



GAN 350–2500 performance envelope



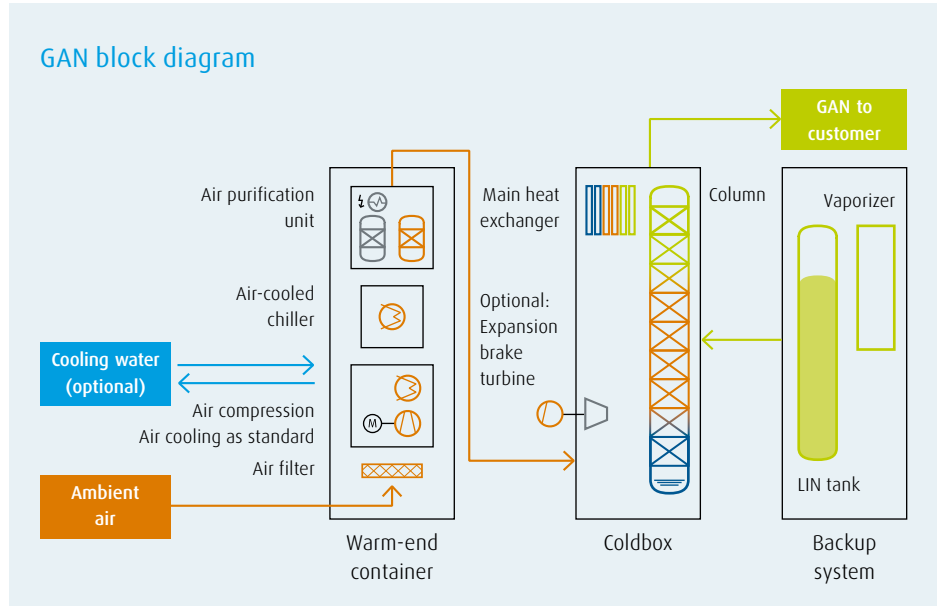
easy operation. The modular design and compact footprint reduce installation effort and commissioning work on site. All GAN models are built to the highest international standards to withstand even the harshest of environmental conditions and deliver 24x7 reliability. GAN plants enable capacities from 350 normal cubic meters an hour (Nm<sup>3</sup>/h) up to 2,500 Nm<sup>3</sup>/h at purity levels of up to 99.9999% to support individual volume and purity needs. In addition, gas reserves can be stored in liquid form and subsequently vaporized to either boost your supply or bridge peaks in demand and plant shutdowns.

## Proven track record

Having already successfully supplied and commissioned over 250 air separation plants worldwide, including 40 GAN plants, Linde CryoPlants Ltd. is renowned for its engineering excellence, innovative technologies and strong commitment to customer service. Our expert engineers cover the full service spectrum from installation to remote control, leaving you free to focus on your core business.

# Optimized process flow

Regardless of the model, GAN systems consist of multiple process steps – each of which is dimensioned to support the target flow and pressure requirements. For added flexibility and additional reserves of liquid nitrogen, the design includes a backup system.



## Technical features

- Ambient temperature from -35C to +45C
- Compact, containerized design for ease of transport and installation
- Simultaneous availability of gaseous and liquid nitrogen
- Fail-safe operation in the event of a malfunction
- LIN tanks and vaporizer can be integrated with plant control system for uninterrupted supplies
- Air-cooled plants and water-cooled options
- Automatic plant operation including load tracking
- Remote operation from central control room
- Telemetry support available from Linde CryoPlants
- Standard plant purity to 1 ppm of O<sub>2</sub>. Higher purity up to 0.1 ppm of O<sub>2</sub> available on request
- Product pressure from 4 to 10 barg available (model-specific)
- GAN plants are capable of more than 50% turndown

