

University Engineering Department

Focus:

An electrical and computer engineering department at a southeastern university ranked among the top academic institutions in the United States.

Challenge:

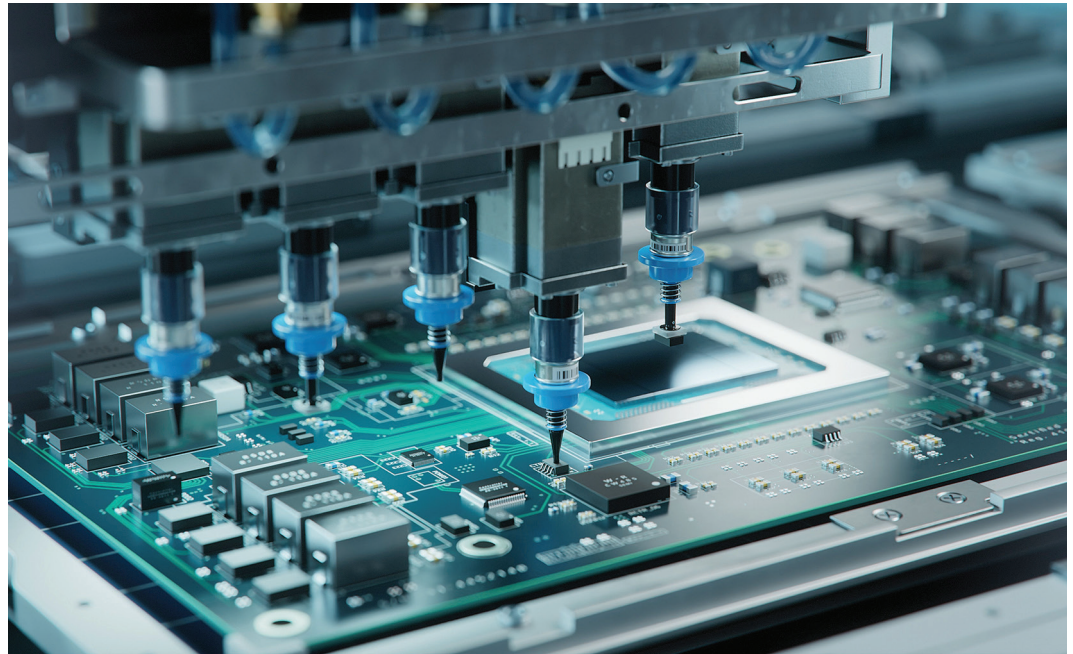
The department is highly dependent on a bulk nitrogen supplier and is concerned about how operations would be adversely affected in the event of a shortage or supplier error.

Solution:

The customer installed a Parker DB-10 and DB-5 Nitrogen Generator to ensure a reliable, on-demand supply of nitrogen.

Impact:

The customer has improved departmental efficiencies and reduced costs with onsite nitrogen gas generation. The Parker nitrogen generators are meeting their demand without any concerns for interruptions; gone are their worries about supply deliveries or maintenance intervals.



Project Name: University Engineering Department

Location: Southeastern United States

Summary

The engineering department needed a solution that would provide dependable and hassle-free nitrogen. Historically the university relied upon high-pressure cylinder gas delivery by due to rising costs, sourcing difficulties, and unreliability, the customer decided to switch to onsite nitrogen generation.

Challenge

Due to the frequency of nitrogen usage in the electrical and computer engineering department, relying on high-pressure cylinder deliveries from a supplier was proving to be problematic for the university. The customer was looking to implement an onsite gas generator to eliminate concerns about the safety and reliability of current nitrogen gas deliveries. The department needed an onsite nitrogen generation system that allowed them to have total control of their nitrogen gas supply and maximize uptime.

Solution

Parker installed a DB-10 and DB-5 nitrogen generator that provide purities up to 95%-99.999% with flow control valve allowing for complete customization. A Parker onsite gas generator is providing the university with a continuous supply of nitrogen in a safe, cost-effective manner with minimal maintenance required; they only require the simple upkeep of changing two filter elements every six months. Eliminating reliance on a delivery of high-pressure cylinders brought enormous relief to the department. The installation of these generators provided the customer high-purity, consistent nitrogen with efficient and dependable performance.

DB Series Dual-Bed Nitrogen Gas Generators

A range of comprehensive industrial PSA nitrogen generators that utilize 2 sets of carbon molecular sieve beds to produce up to 99.999% pure, compressed nitrogen from a standard compressed air supply at dewpoints down to -58°F (-50°C). These full-feature generators are the ideal choice for applications that require medium to high nitrogen purities at medium flow rates. Features include:

Wide range of nitrogen purities

- Produce nitrogen purities from 95 to 99.999% (5% to 10 ppm O₂)
- Flow control valve allows for field adjustment of nitrogen purity

High flow capacity*

- Cabinet DB deliver N₂ flow up to 2048 scfh @ 99.5%
- Twin tower DB deliver N₂ flows up to 5445 scfh @ 99.5%

Portable and Expandable

- Cabinet DB units come fitted with casters for portability
- DB-5 through DB-10 can be purchased with expanded cabinet designs that allow for future expansion up to a DB-20

Integrated filtration

- High efficiency pre-filtration removes inlet air particles down to 0.1µm
- SS sterile air final filter provides outlet filtration efficiency of 99.9999+% at 0.01µm and has full compliance with FDA and USDA requirements

Standard instrumentation

- Operating pressure gauges
- Nitrogen flow meter
- Percent O₂ analyzer (95-99.95%)
- Parts per million (PPM) O₂ analyzer (99.99-99.999%)
- Outlet pressure regulator

*Flow rates based on inlet of 110 psi g (7.6 bar g) and 77°F (25°C).



DB-5

Ideal for medium to high nitrogen purity applications where 1% to 10ppm remaining oxygen content is permissible. Such as:

- Heat treatment
- Pharmaceutical
- Food & beverage packaging
- Blanketing of ingredients
- Laser cutting
- Electronics manufacturing

