

## Nitrogen Production Unit (NPU)

**Focus:**

A global manufacturer that provides industrial gases and services to a variety of industries. Its rental division specializes in supplying nitrogen rental membrane systems for the oil and gas industry for onshore and off-shore installations.

**Problem:**

Providing a versatile nitrogen production unit (NPU) suitable for the rental market.

**Solution:**

Parker designed a turn-key nitrogen membrane system utilizing the customer's high-pressure membrane technology.

**Impact:**

The customer has since expanded their rental offerings, especially in applications for pipeline drying. Prior to the NPU installation, they only offered high pressure cylinders which did not meet the requirements for the application. The Parker systems are designed to be versatile and portable and to allow for easy transportation between job sites.



**Project Name:** Nitrogen Production Unit (NPU)  
**Location:** Global Deployment

### Summary

In 2020, the customer began looking for partners to expand their market share in the rental business. Already established as an existing partner, Parker was a clear choice to work with for the design of these packages. Parker has vast experience in the oil and gas industry and has many years of experience designing and building nitrogen production units. The installation for this project took place in August of 2021.

### Challenge

This global manufacturer provides nitrogen to remote areas for pipeline (pigging) and blanketing applications. Their existing offering of high pressure cylinders was not suitable for pipeline drying service applications, and they had a great need for a mobile, turn-key solution that could supply a variety of downstream pressures and flow rates.

### Solution

Parker designed and manufactured a nitrogen production unit (NPU) capable of 3000 SCFM at 300 PSIG. This 20' DNV certified system can be paired with a booster compressor for applications reaching up to 3000 PSIG. In addition to the nitrogen membrane modules, the system contains an industry-leading Allen-Bradley® MicroLOGIX PLC, water separator, filtration, carbon tower, and heater. The versatility and portability of the nitrogen production unit will provide customers an energy efficient and reliable flow of nitrogen for a variety of applications.

## Nitrogen Production Unit (NPU)

### Portable Nitrogen Membrane Systems

Up To 400 PSIG (28 BARG)

#### Custom Designed Systems

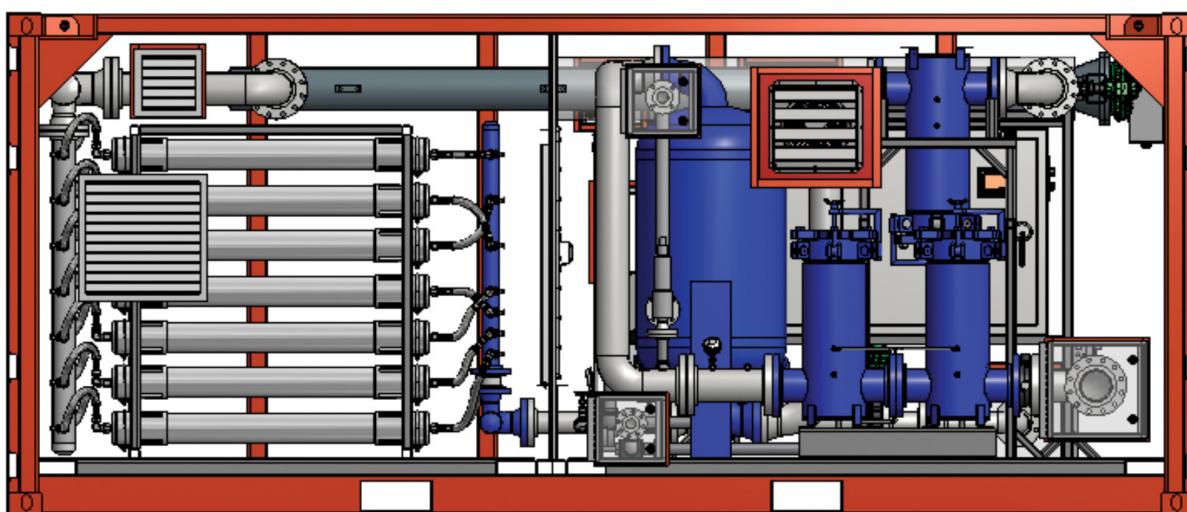
Parker nitrogen generators are engineered with the highest attention to detail and provide state-of-the-art features and benefits to help drive your success.

Parker's HiFluxx® membranes are the ideal solution for large generators that must be compact and lightweight, such as trailer-mounted or containerized systems. The systems can be designed for low or high pressure feed air sources, giving the user the option of utilizing plant air or a multi-stage compressor. Parker's membrane system design offers the flexibility and feed air options for both onshore and offshore applications.



#### Advantages

- Portable nitrogen gas generator
- Up to 3,000 scfm (5100 m3/hr) at 95% purity
- DNV shipping containers / CE certified
- IEC electrical requirements
- Australian AS1210 compliance (50 Hz & 60 Hz)
- Drilling, pipeline, marine, mining and process facilities



Interior view of containerized system