



Deep Pneumatics®

Transformation towards sustainable growth

DPNI/DPOX Series

On-site PSA Gas Generators

DPNI: 1 to 300 Nm³/Hr (Purity: 95% - 99.999%)

DPOX: 5 to 60 Nm³/Hr (Purity: 90% - 95%)



PSA Gas Generator

Why On-site PSA Gas Generators?

Air around us contains 78% nitrogen, 21% oxygen and 1% other gases with water vapour. PSA Gas Generators separate nitrogen or oxygen from compressed air through the Pressure Swing Adsorption (PSA) process, delivering gas with assured purity for various industrial uses.

PSA Gas Generators are widely used in laser cutting applications, offering reliable on-site gas availability as per demand. They help increase productivity, eliminate supply chain and cylinder handling costs, and provide 100% assurance of purity, dryness, and quantity of gas.

With safe operations, environmentally friendly technology, and faster ROI, PSA Gas Generators are a sustainable and cost-effective solution for industries.



<i>Unique Features</i>	<i>Advantages</i>	<i>Customer Benefits</i>
Superior design	Lower compressed air consumption	Power saving
Robust skid	Ready to start	Quick installation
High quality adsorbent	Guaranteed purity	Peace of mind
Reliable change over valves	Continuous operation	Less maintenance
Automatic operations	Uninterrupted gas generation	Higher productivity
Advanced controller	Automatic start-up	Easy monitoring

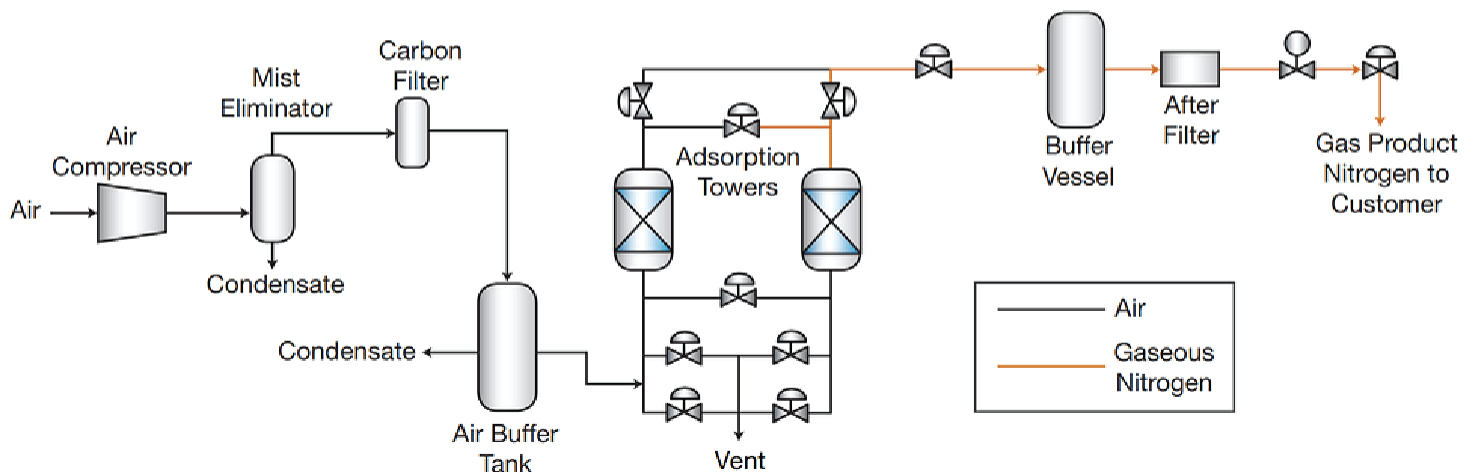
**Technical Parameters of
On Site PSA Nitrogen Generator**

Model	Purity (%)	Capacity (NM3/h)
DPNI-05	99 99.5 99.9 99.99	5
DPNI-10	99 99.5 99.9 99.99	10
DPNI-15	99 99.5 99.9 99.99	15
DPNI-20	99 99.5 99.9 99.99	20
DPNI-30	99 99.5 99.9 99.99	30
DPNI-40	99 99.5 99.9 99.99	40
DPNI-50	99 99.5 99.9 99.99	50
DPNI-60	99 99.5 99.9 99.99	60
DPNI-80	99 99.5 99.9 99.99	80
DPNI-100	99 99.5 99.9 99.99	100
DPNI-150	99 99.5 99.9 99.99	150
DPNI-200	99 99.5 99.9 99.99	200
DPNI-250	99 99.5 99.9 99.99	250
DPNI-300	99 99.5 99.9 99.99	300

Technical Parameters of On Site PSA Oxygen Generator

Model	O2 Capacity		Equivalent		Purity
	LPM	m ³ /hr	Liquid Oxygen (Liters/day)	Cylinders per day	%
DPOX85	85	5	153	15-18	93+/-2
DPOX140	140	8	250	25-30	93+/-2
DPOX166	166	10	282	30-34	93+/-2
DPOX180	180	11	320	35-40	93+/-2
DPOX210	210	12.5	370	40-45	93+/-2
DPOX230	230	14	415	45-50	93+/-2
DPOX260	260	15	460	50-60	93+/-2
DPOX334	334	20	650	60-68	93+/-2
DPOX415	415	25	750	80-90	93+/-2
DPOX500	500	30	840	100-110	93+/-2
DPOX560	560	34	1000	110-125	93+/-2
DPOX665	665	40	1200	125-130	93+/-2
DPOX833	833	50	1270	130-160	93+/-2
DPOX960	960	57	1700	170-220	93+/-2

Nitrogen Generator

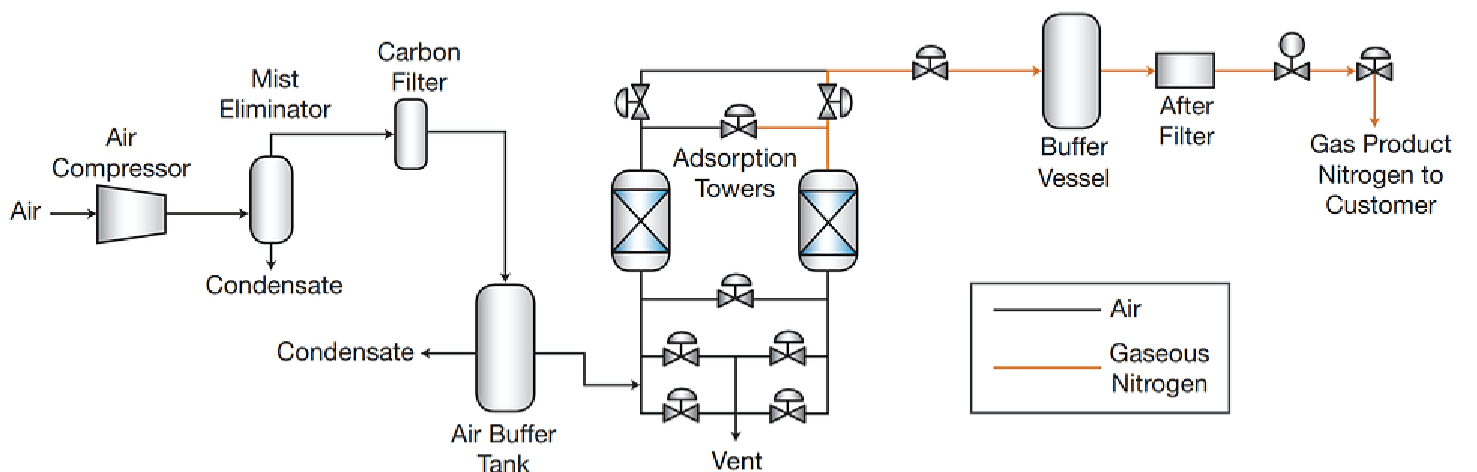


Note: Figure is just for reference to understand the flow of Gas (Nitrogen/Oxygen)

PROCESS DESCRIPTION OF PSA GAS GENERATOR

Compressed air passes through twin PSA towers with automatic changeover valves. Moisture is first removed by activated alumina, then oxygen and other impurities are absorbed by carbon molecular sieves (CMS), allowing nitrogen to pass as product gas. The towers operate alternately to ensure continuous supply. Purified gas is stored in a surge vessel, regulated for minimum pressure, and delivered through pressure reducing valves at the required pressure.

Oxygen Generator



Note: Figure is just for reference to understand the flow of Gas (Nitrogen/Oxygen)

PROCESS DESCRIPTION OF PSA GAS GENERATOR

Compressed air passes through twin PSA towers with automatic changeover valves. First, moisture is removed by activated alumina. The dry air then enters zeolite molecular sieves (ZMS), where oxygen, moisture, and other impurities are absorbed, while nitrogen exits as product gas. The two PSA towers operate alternately to ensure uninterrupted supply. The purified gas is collected in a surge vessel, where pressure is regulated, and finally delivered to the consumer through pressure reducing valves at the required pressure.

Our Widespread Sales Network:

