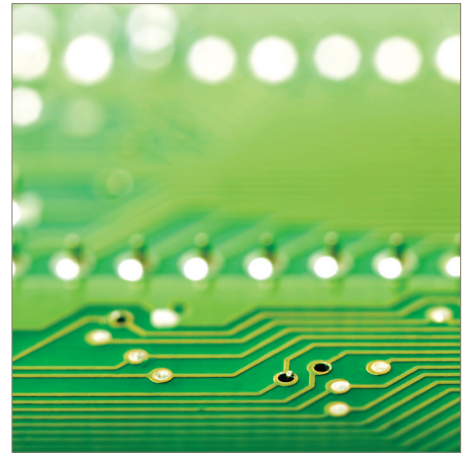


Dual-Bed (DB) Series Cabinet PSA Nitrogen Gas Generation Systems



PSA Nitrogen Generators

Nitrogen is used as a clean, dry, inert gas primarily for removing oxygen from products and/or production processes. Nitrogen gas is used in a wide range of industries including food, beverage, pharmaceutical, laboratory, chemical, heat treatment, electronics, transportation, oil & gas, mining and marine.

Nitrogen generators offer a cost effective, reliable, and safe alternative to traditional cylinder or liquid nitrogen gas supplies. Using a supply of clean, dry compressed air, nitrogen generators can provide an on-demand, continuous source of high-quality nitrogen gas.

Pressure Swing Adsorption (PSA) technology uses 2 sets of vessels filled with carbon molecular sieve (CMS) to separate compressed air. Oxygen and other waste gases are selectively adsorbed under pressure by the CMS, allowing nitrogen to pass through to the application.

The CMS is regenerated by releasing the pressure in one the vessels and venting the waste gases to atmosphere, while the other vessel(s) continues to separate air and deliver a continuous supply of nitrogen.

Parker's DB Series is a range of industrial PSA nitrogen generators take a supply of compressed air and deliver nitrogen with purities up to 99.999% at dewpoints down to -58°F (-50°C). These full-feature generators are the ideal choice for applications that require medium to high nitrogen purity at medium flow rates.



Advantages

- Compact, portable design maximizes floor space.
- Expandable cabinet models allow for future N2 flow expansion.
- Continuous, on-demand supply of nitrogen with purities ranging from 95 to 99.999%.
- SS sterile air final filter provides outlet filtration efficiency of 99.9999+% at 0.01µm and has full compliance with FDA and USDA requirements
- Allen Bradley® PLC controls with 4-line LCD display.
- Includes nitrogen flow meter, outlet pressure regulator, nitrogen buffer tank and an oxygen analyzer with display.
- Purity can be easily adjusted and set on-site.
- Zirconia O₂ sensor with up to 5-year life and requires no calibration.
- Stand-By Mode saves energy during periods of low demand.
- Improves safety, reliability, and lowers operating costs versus traditional cylinder or liquid nitrogen gas supplies.



ENGINEERING YOUR SUCCESS.

Product Selection

Series	Model	O2 Analyzer	Cabinet Type
DB Dual-Bed	5 10 15 20 See Product Selection below for flow rates	PCT Purities between 95-99.9% PPM Purities between 99.95-99.999%	Blank No extended cabinet EC Extended cabinet (Models 5 & 10 only)

Example: DB-15-PPM

Nitrogen Flow Rates in SCFH (Nm³/hr)

N2 Purity	O2 Content	DB-5-[*]	DB-10-[*]	DB-10-[*]-EC	DB-15-[*]	DB-20-[*]
99.999%	10 ppm	94 (2.6)	189 (5.4)	189 (5.4)	283 (8.0)	377 (10.7)
99.995%	50 ppm	150 (4.2)	300 (8.5)	300 (8.5)	450 (12.7)	600 (17.0)
99.99%	100 ppm	194 (5.5)	388 (11.0)	388 (11.0)	583 (16.5)	777 (22.0)
99.95%	500 ppm	314 (8.9)	629 (17.8)	629 (17.8)	943 (26.7)	1258 (35.6)
99.9%	0.10%	365 (10.3)	730 (20.7)	730 (20.7)	1095 (31.0)	1460 (41.3)
99.5%	0.50%	512 (14.5)	1024 (29.0)	1024 (29.0)	1536 (43.5)	2048 (58.0)
99%	1%	618 (17.5)	1200 (34.0)	1200 (34.0)	1853 (52.5)	2470 (70.0)
98%	2%	770 (21.8)	N/A	1541 (43.6)	2311 (65.4)	3081 (87.2)
97%	3%	892 (25.3)	N/A	1783 (50.5)	2675 (75.75)	3566 (101.0)
96%	4%	983 (27.8)	N/A	1966 (55.7)	2949 (83.5)	3931 (111.3)
95%	5%	1065 (30.2)	N/A	2130 (60.3)	3195 (90.5)	4260 (120.6)

1. Flow Rates based on inlet of 110 psi g (7.6 bar g) and 77°F (25°C). Nitrogen generator purity is pressure, temperature, and flow dependent.
2. Higher flow and purities can be accomplished at higher pressures. Consult factory for assistance with sizing.

Technical Specifications

Model Number ¹	Min. Ambient Temperature	Max. Ambient Temperature	Min. Inlet Temperature	Max. Inlet Temperature	Min. Inlet Pressure	Max. Inlet Pressure	Max. Press. Drop	Nitrogen Dewpoint	Power Supply
DB-5-[*]									
DB-10-[*]	40°F	95°F	60°F	105°F	80 psi g	140 psi g	30 psi d (2 bar d)	-58°F	120V-1Ph- 60Hz 180 Watts
DB-15-[*]	(5°C)	(35°C)	(16°C)	(40°C)					
DB-20-[*]									

1. Replace [*] with "PCT" for percent analyzer (purities 95-99.9) or "PPM" for parts per million analyzer (purities 99.95-99.999%).
2. Only DB-5 and DB-10 models can be purchased with Extended Cabinet (-EC) option. Allows for expansion into a DB-20.

Weights and Dimensions

Model Number	DB-5-[*]	DB-10-[*]	DB-15-[*]	DB-20-[*]
Dimensions (W x D x H)	28.6" x 33.6" x 79.6" 73 cm x 86 cm x 203 cm		28.8" x 51.6" x 78.6" 74 cm x 132 cm x 200 cm	
Shipping Weight	1065 lb (483 kg)	1265 lb (574 kg)	1553 lb (705 kg)	1753 lb (795 kg)
Inlet/Outlet Port Size	1/2" NPT / 1/2" NPT		1" NPT / 3/4" NPT	
Nitrogen Buffer Tank	60 gal (277 liters) 24"D x 53"H (61 cm x 135 cm)			

1. Weights and dimensions shown for all models are approximate. Parker reserves the right to make changes without notification. Consult factory for general arrangement drawings.
2. For DB-10-[*]-EC model: use dimensions and port size of DB-20-[*] and weights of DB-10-[*].

