

Nitrogen Generators

Process Description

Nitrogen generation by Pressure Swing Adsorption (PSA)

The Nitrogen generation plant based on the PSA-process (fig. 1) consist of two adsorption towers filled with carbon molecular sieve. Compressed and purified air is passing the adsorption towers. Mainly Oxygen is adsorbed on the carbon molecular sieve and Nitrogen enriched gas is leaving the tower. The Oxygen concentration can be reduced to client's required purity levels. During adsorption in one tower the second tower is totally regenerated just by depressurization to ambient pressure. The Oxygen enriched off gas with 30-35 vol.-% Oxygen content is vented to the outside atmosphere. After about one minute adsorption in one adsorption tower the process controller is switching over to the second tower and the first one is regenerated.



We Do More Than Generate Nitrogen.
We Generate Productivity And Profitability.

Typical Applications

- Food processing, packaging, blanketing and storage
- Chemical processing
- Pharmaceutical
- Electronics manufacturing
- Refrigeration manufacturing
- Heat treating
- Plasma and laser cutting
- Corrosive liquid cooling
- Gas Assist Injection Molding
- Material handling and storage
- Tire inflation (automotive, aircraft, off road)

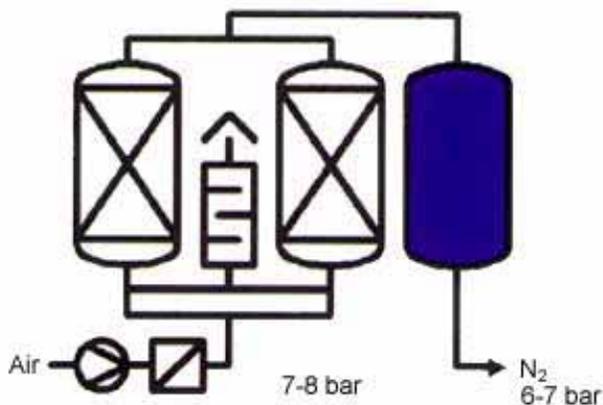


Figure 1:
PSA-process for Nitrogen generation

Standard PSA Models Available

Model	Nitrogen Flow Rate (SCFH)						
	99.99%	99.9%	99.5%	99%	98%	97%	95%
GA-5	51	107	169	212	271	313	381
GA-10	118	248	394	493	631	729	887
GA-20	192	404	641	801	1025	1185	1442
GA-30	278	585	928	1160	1485	1717	2088
GA-40	382	803	1274	1592	2038	2356	2866
GA-50	455	956	1517	1895	2427	2805	3412
GA-60	538	1129	1792	2240	2868	3316	4033
GA-70	633	1330	2111	2638	3378	3905	4749
GA-80	745	1563	2482	3102	3971	4591	5584
GA-90	827	1737	2757	3447	4412	5101	6204
GA-100	903	1895	3009	3761	4814	5566	6770
GA-120	1083	2275	3611	4513	5777	6679	8124
GA-150	1352	2838	4505	5631	7209	8334	10137
GA-200	1801	3781	6002	7502	9604	11103	13504
GA-250	2363	4726	7503	9377	12005	13879	16880
GA-300	2814	5908	9378	11721	15006	17348	21100
GA-400	3605	7570	12016	15018	19227	22228	27034
GA-500	4558	9571	15193	18988	24310	28104	34182
CT-4205	6131	12874	17165	19105	21829	23807	28956
CT-5405	7979	16754	22314	24814	28322	30897	37579
CT-6405	9880	20747	27688	30748	35151	38360	46656

Based on Inlet Air Pressure of 115 PSIG, 68 deg F
 Compressed Air is SCFM @ 14.696 PSIA, 68 Deg. F, 70% RH
[Contact Factory for other conditions](#)

The carbon molecular sieve used by CarboTrade/Pneumatech in PSA nitrogen is manufactured by CarboTech of Essen, Germany. CarboTech is also the developer and licensor of the PSA Process Technology. Pneumatech, a manufacturer of PSA air dryers for over 20 years, manufactures CarboTech PSA nitrogen generators in the USA. There are over 8000 PSA units operating worldwide, either manufactured by CarboTech or its licensees.

Distributed By: