

MODULAR NITROGEN GENERATOR



Patented
Products

High Efficiency Systems in Nitrogen Gas Production
Nitrogen Production Unit



7/24
HOT LINE
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ADVANTAGES OF THE MODULAR NITROGEN GENERATOR

Produces high-purity nitrogen gas from compressed air (purity up to 99,999%).

Due to its modular design (international patents pending);

- ▶ Creates the most appropriate solution to any capacity of required nitrogen gas.
- ▶ Modular design offers you ideal and economical opportunities as nitrogen consumption increases.
- ▶ Simply adjust your NITROPAK system by varying the number of PSA modules by yourself, no other adjustment or additional component is required.
- ▶ Modular design: Decreases energy costs due to ideal capacity utilization, that provides real savings to you.
- ▶ If we express another way, the capacity value does not fall swiftly while purity value increases like in the twin tower design.
- ▶ PSA modules are made from eloxal coated aluminum fins and aluminum cast heads with electrostatic heat coatings; this coupled with their ease of assembly and disassembly, a resistant PLC screen and good valves, they can operate for long periods of time.
- ▶ Inlet pressure of pressured air: 7,5bar(g), Nitrogen outlet pressure: 6,5bar(g)
- ▶ Inlet pressure of pressured air: 10bar(g), Nitrogen outlet pressure: 8bar(g)
- ▶ Inlet pressure of pressured air: 11,5bar(g), Nitrogen outlet pressure: 10,5 bar(g)
- ▶ Modular design offers you a compact construction; Ideal for container solutions with this size constancy.
- ▶ The spare parts are the same in the all models where identical components are used for the entire model range. This means, limited spare part management, easy maintenance and services.
- ▶ Same desiccant material and bead diameter use for all models.
- ▶ Modular NITROPAK is limited with a total of 8 pairs of modules. It possible to operate a total of 3 Modular NITROPAK systems with 8 module pairs with the same PLC and Nitrogen Analyzer.

WHAT IS PSA TECHNOLOGY?

Nitrogen generators consist of colons full of CMS (Carbon Molecular Sieve) Material. Under pressure, these colons hold all the materials except Argon noble gas in the air. During pressure application, Oxygen, CO₂ and water molecules attach to molecular sieve material. This process is known as pressure swing adsorption (PSA).

STANDARD EQUIPMENT

- ▶ Water separator for inlet of compressed air, 1 unit
- ▶ Water discharge system with zero air loss, 1 unit (Zeromat)
- ▶ Line filters to for feeding pressure air, 2 units (0,5 and 0,01 mg/m³)
- ▶ Output filter, 0.01 mg/m³, 1 pcs
- ▶ Pneumatic valves
- ▶ PLC control system with fully automatic operations
- ▶ Pressure switch for automated Idle-Mode
- ▶ Sensor for inlet of feed compressed air quality
- ▶ Exhaust mufflers
- ▶ Regulator for nitrogen pressure



FIELDS OF APPLICATION

- ▶ Nitrogen gas is used in a variety of industrial applications.
- ▶ It is stored or produced on-site to suppress other unwanted gases such as Oxygen in various processes.

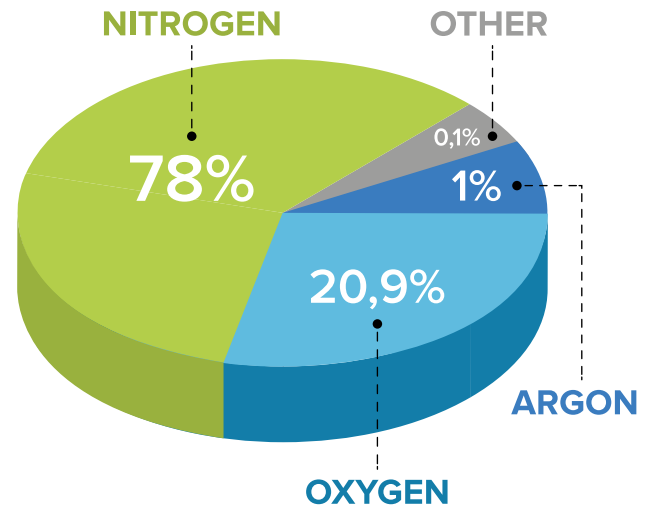
FOOD, MEDICINE, PACKAGING, AVIATION, AUTOMOTIVES, LASERCUTTING, ELECTRONICS, PETROCHEMICALS, PLASTIC INJECTIONS, COOLING, CHEMICAL, COATING, COSMETICS industries are the main sectors.

LCD TOUCH DISPLAY CONTROL PANEL PROPERTIES

- ▶ Total work time display
- ▶ Automatic or manual operation
- ▶ Measurement of gas purity constantly or instantly (Optional 30 days purity memory)
- ▶ Adjustable time settings
- ▶ Language (Turkish-English-Spanish)
- ▶ One touch technical service contact details
- ▶ Optional alarm with sound or light on demand
- ▶ Automatic stop control when outlet pressure increases



DRY AIR COMPOSITION





MODULAR NITROGEN GENERATORS TECHNICAL DATA

Model	Weight (Kg)	Dimensions L x D x H (mm)	Content (μm)	Inlet Air Pressure (Barg)	N ₂ Output Pressure (Barg)	Power V/ph/Hz
NITROPAK 102	306	480x725x1740	0.01	7,5	6	110 - 230 / 1 / 50 - 60
NITROPAK 104	457	480x950x1740	0.01	7,5	6	110 - 230 / 1 / 50 - 60
NITROPAK 106	609	480x1175x1740	0.01	7,5	6	110 - 230 / 1 / 50 - 60
NITROPAK 108	760	480x1400x1740	0.01	7,5	6	110 - 230 / 1 / 50 - 60
NITROPAK 110	912	480x1625x1740	0.01	7,5	6	110 - 230 / 1 / 50 - 60
NITROPAK 112	1063	480x1850x1740	0.01	7,5	6	110 - 230 / 1 / 50 - 60
NITROPAK 114	1214	480x2075x1740	0.01	7,5	6	110 - 230 / 1 / 50 - 60
NITROPAK 116	1365	480x2300x1740	0.01	7,5	6	110 - 230 / 1 / 50 - 60

MINIMUM NITROGEN OUTPUT FLOW WITH COMPRESSED AIR INLET PRESSURE OF 7,5 BAR (g)

MODEL/PURITY	N ₂ Flow (Nm ³ /h)	Operating Pressure: Up to 11,5 bar (Standart: 7 bar)							
		97%	98%	99%	99.5% ¹	99.9%	99.95%	99.99%	99.995%
NITROPAK 102	31.2	27	20.7	17	12	9.9	6	5.1	3.9
NITROPAK 104	62.4	54	41.4	34	24	19.8	12	10.2	7.8
NITROPAK 106	93.6	81	62.1	51	36	29.7	18	15.3	11.7
NITROPAK 108	124.8	108	82.8	68	48	39.6	24	20.4	15.6
NITROPAK 110	156	135	103.5	85	60	49.5	30	25.5	19.5
NITROPAK 112	187.2	162	124.2	102	72	59.4	36	30.6	23.4
NITROPAK 114	218.4	189	144.9	119	84	69.3	42	35.7	27.3
NITROPAK 116	249.6	216	165.6	136	96	79.2	48	40.8	31.2

OUR COMPANY MAY CHANGE THE VALUES IN THE CATALOGUE ACCORDING TO THE RESEARCH AND DEVELOPMENT STUDIES.

CORRECTION FACTORS

PRESSURE INLET BAR (psi) FOR 7,5 BAR (g) INLET

COMPRESSED AIR INLET PRESSURE	6,5 (94,3)	7,5 (108,8)	8,5 (123,3)	9,5 (137,8)	10,5 (152,3)
PERFORMANCE PERCENTAGE	0,84	1	1,08	1,16	1,19

COMPRESSED AIR INLET TEMPERATURE IN °C (°F)

5 (41)	10 (50)	15 (59)	20 (68)	25 (77)	30 (86)	35 (95)	40 (104)	45 (113)	50 (112)
0,85	1,03	1,02	1	0,93	0,86	0,8	0,72	0,6	0,52

REFERENCE CONDITIONS ②

- ▶ Ambient Temperature Working Range : +5 / +40°C (41°F / 104°F)
- ▶ Minimum Air Inlet Pressure : 6,5 bar (g) (94,3 psi)
- ▶ Maximum Air Inlet Pressure : 11,5 bar (g) (181,3 psi)

Please Check Correction Factor

Compressed Air Inlet Quality: ISO 8573-1

1. Quality \longrightarrow 1-1-2 or

1. Quality \longrightarrow 1-1-4

- ▶ Electrical Power Supply : 110 / 230V, 50/60Hz

- ① WITH A TOLARANCE OF $\pm 5\%$ ② CHECK REFERENCE CONDITIONS ③ PLEASE CONTACT CUSTOMER SERVICE AND/OR REPRESENTATIVE FOR ADVICE

OUR COMPANY CAN OPTIONALLY INSTALL A NITROGEN LIQUEFYING UNIT TO THESE MODELS
 OUR COMPANY MAY CHANGE THE VALUES IN THE CATALOGUE ACCORDING TO THE RESEARCH AND DEVELOPMENT STUDIES.
 FOR BIGGER CAPACITIES AND MODELS, PLEASE CONTACT WITH OUR TEAM