

Usiox² OXYGEN PLANT

DINATEC has developed a line of Oxygen Plants to attend small, medium and large industries. The USIOX Plants are built following international quality standards and it has several accessories developed exclusively by DINATEC.

Focus on a definite, economic and safe solution, DINATEC offers an ideal Oxygen Plant USIOX for each industry.



Cód.	Models	Production		Compressor	
		O ₂ - 95%	Power	Emptying	
		m ³ /hr	HP	m ³ /hr	m ³ /hr
1010.0001	Usiox - 05	936	5	1.3	30
1010.0002	Usiox - 07	1.296	7.5	1.8	48
1010.0003	Usiox - 010	1.872	10	2.6	70
1010.0004	Usiox - 020	3.816	15	5.3	100
1010.0005	Usiox - 030	5.688	25	7.9	200
1010.0006	Usiox - 040	7.560	30	10.5	230
1010.0007	Usiox - 050	9.432	40	13.1	280
1010.0008	Usiox - 075	14.112	50	19.6	420
1010.0009	Usiox - 0100	18.936	60	26.3	774
1010.0010	Usiox - 0150	28.368	100	39.4	865
1010.0011	Usiox - 0200	37.872	120	52.6	1075
1010.0012	Usiox - 0300	56.808	200	78.9	1680

Specifications

- Exit pressure of standard oxygen: 4-5 bar
- Pressure of air entrance: 7 bar (minimum).
- Energy efficiency: 2,0 kwh/m³ (95% - of 2,6 to 20 m³/hr) and 1,5 kwh/m³ (95% - from 26 m³/hour).
- Outflow: from 1.3 to 78.9 m³/hour (special models by consult).

Remote Monitoring System

Monitoring System of Oxygen Plants with pressure sensors and oxygen purity. It accompanies on-line service that permit the detection of faults, viewing of the equipment performance and customer contact.

Multi Stages System

The exclusive multi stages system of the plants enables more oxygen production, less physical space and easy upgrade of the equipment.

Operation flow chart Oxygen plant – USIOX

01. FINI ® Screw Air Compressor
02. FINI ® Screw Air Compressor
03. Compressed Air Tank
04. 2 (two) Coalescent Filter 01 micron
05. Dryer as refrigeration (3°C dew point)
06. Coalescent Filter of 0,01 micron
07. Carbon Filter Active
08. Drier by Adsorption (-45° C dew point) DinaDryer®
09. Compressed Air Tank
10. Oxygen Concentrator USIOX®
11. Oxygen Tank
12. Oxypressure® Cooling Tower
13. Oxypressure®
14. O₂ 10 bar Compressor
15. Cylinders filling
16. O₂ 10 bar Reservoir

Applications

- Effluent Treatment
- Laser Cut Machine
- Ozone Generation
- Steel Melting
- Steel, Aluminium, Lead and Metal Melting
- Pharmaceutical Industry
- Metal – weld and oxy cut
- Steel Industries
- Light Industries (OSRAM, GE)
- Gas Dealer
- Oven of Combustion





Nitrogen Purity 95% - 99,999%

The Nitrogen generators USINITRO were developed by DINATEC focusing on attending the big demand of Nitrogen in the several industrial segments.

The system of Nitrogen generation PSA consists to the caption of the air from the atmosphere, compressing, filtering, drying and concentrating in molecular sif (CMS).

Cód.	Models	Nitrogen 99%		Nitrogen 99,5%		Nitrogen 99,9%	
		Productive m ³ /hour	Necessary Air m ³ /hour	Productive m ³ /hour	Necessary Air m ³ /hour	Productive m ³ /hour	Necessary Air m ³ /hour
1013.0002	Usinitro N-20	6	24	5,3	21	3,2	19
1013.0003	Usinitro N-35	10,5	39	9,2	36	5,5	30
1013.0004	Usinitro N-50	15,1	55	13,1	52	7,9	45
1013.0005	Usinitro N-75	22,6	83	19,7	78	11,8	65
1013.0006	Usinitro N-100	30,2	110	26,3	103	15,8	90
1013.0007	Usinitro N-130	39,2	143	24,1	134	20,5	115
1013.0008	Usinitro N-155	48,8	170	40,7	160	24,4	140
1013.0009	Usinitro N-260	78,5	286	68,3	268	41	230
1013.0010	Usinitro N-300	90,6	330	78,8	309	47,3	270
1013.0011	Usinitro N-360	108,7	396	94,5	371	56,7	330
1013.0012	Usinitro N-455	137,4	500	119,4	469	71,7	400
1013.0013	Usinitro N-620	187,2	681	162,8	639	97,7	570

Commercial Vantages

- Low cost of production;
- Autonomy in the nitrogen production;
- Quality control of the product;
- Supply failures elimination due to the logistic;
- Stabilization on the gas cost.

Purinitro

To attend the high purity nitrogen market, DINATEC developed the Purinitro line.

Starting from 99,9% nitrogen purity or 1000 ppm of residual oxygen, the purifiers PURINITRO withdraw the remaining oxygen from the mixture.

The result purity is 99,999% or 10 ppm of residual oxygen.

The purification system consist in:

- system of purifiers vases containing copper catalysers;
- system of hydrogen injection. The hydrogen react with the oxygen, producing water (H₂O);
- system of drying by adsorption drier;
- system of monitoring for oxygen purity.

Cod.	Model	Pressure			Purity			Hydrogen Consumption Nm ³ /h
		Input - Nm ³ /h	Output - Nm ³ /h	Pressure	Input Purity - Nm ³ /h	Output Purity - Nm ³ /h	Dimensions - m	
1202.0001	Purinitro P7	7	5	7	99,9%	99,999%	2,5 x 2 x 2	0,028
1202.0002	Purinitro P20	20	15	7	99,9%	99,999%	2,6 x 2 x 2	0,08
1202.0003	Purinitro P40	40	30	7	99,9%	99,999%	2,8 x 2 x 2	0,16
1202.0004	Purinitro P70	70	50	7	99,9%	99,999%	3,0 x 2 x 2	0,28
1202.0005	Purinitro P140	105	100	7	99,9%	99,999%	3,5 x 2 x 2	0,42
1202.0006	Purinitro P160	160	150	7	99,9%	99,999%	3,5 x 2,2 x 2,4	0,64
1202.0007	Purinitro P320	320	300	7	99,9%	99,999%	3,5 x 2,2 x 2,5	1,28

Applications

- Changed atmosphere for packaging
- Food inertization
- Tyre calibrating (fleet and private)
- Deaeration with N₂
- Inertization and back tension of fillers
- Inertization of Head Space of beverage industry
- Inertization of chemical reactors
- Inertization of liquid sugar
- Pressurizing of packaging
- Laser cut of inox steel
- Factories of CDs and digital press
- Thermal treatment of metals
- Sintering of metallic pieces
- Chemical products transfer
- Wine and champagne industries
- Carbon fiber ovens
- Injection of plastic to the high pressure
- Industries of motorcycles' batteries
- Manufacturing of plan glass
- Metals treatment ovens
- Steel refining
- Injection of nitrogen in petrol fields
- Juices' industries

Operating flowchart Nitrogen plant usinitro

01. Air Screw Compressor Main Fini ®
02. Air Screw Compressor Stock Fini ®
03. Air Compressed tank
04. 2 (two) coalescent filters 01 micron
05. Drier refrigeration (3°C dew point)
06. Coalescent filter 0,01 micron
07. Carbon filter active
08. Drier by adsorption (-45°C dew point) DinaDryer®
09. Nitrogen concentrator Usinitro®
10. Nitrogen Tank
11. Nitrogen Tank Reserve
12. Oxypressure® Cooling Tower
13. Oxypressure®
14. Compressor N₂ 10 bar
15. Cage for cylinders filling
16. N₂ 10 bar Tank



Technical Specifications

- Pressure: 6,5 to 8 bar
- Temperature: 15°C
- Available Concentrations: 95% - 99,999%
- Energy Consume: 0,45 kw/m³ purity of 99,5%
- Strain: 220/380/440 V
- Dew Point: -40°C to -90°C