



MEDICAL PSA OXYGEN GENERATOR FOR CLINICS

- Low Energy Consumption
- Long Life
- Smart Algorithm



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About us

Sümer A.Ş. was established in 1981 in Ankara to provide services in the medical device sector. It has aimed advancement since the day of its establishment by also taking growth and compliance with the contemporary technologies and protecting the environmental conditions. Our manufacturing takes place in an area of 25.000 m² in Ankara Organized Industrial Zone.

Our Firm is following the innovations in its sector and in abroad through its research and development unit and its application staff with a strong infrastructure of engineers, and is continuing to produce devices it had developed in computer environment based on such innovations with high technology and to contribute their development so as to be most beneficial for the Turkish Medicine and Industry.

With this purpose, our Firm is strictly following the "Quality Management" principles and rules from design of the products to the after-sale servicing.

Our Firm has been currently certificated for compliance with ISO 9001 quality management system, ISO 13485 medical device quality management system certificate and ISO 14001 environment management system certificate and with product certificates under MDD 93/42/EEC Medical Devices Directive and PED 2014/68/EU Pressurized Equipment certificate. Furthermore, our steam sterilizers, and disinfection and washing devices have been certificated by the German accredited body.

Our Firm possesses the following certificates;
CE Certificates under the following directives:
ISO 9001,
ISO 13485,
ISO 14001 Quality Management System,
MDD 93/42/EEC Medical Devices,
PED 2014/68/EU Pressurized Equipment



Our Vision

To make the Sümer brand a global brand to make our Firm remembered first in the sector.

Our Mission

Our main task is to create designs with competition power in the global sense by taking the priorities of the sector into consideration and being respectful to the environment and people and giving the first priority to the wishes and expectations of customers, and also to produce innovative technological medical products by meeting all the national and international legal requirements.

Our Basic Values

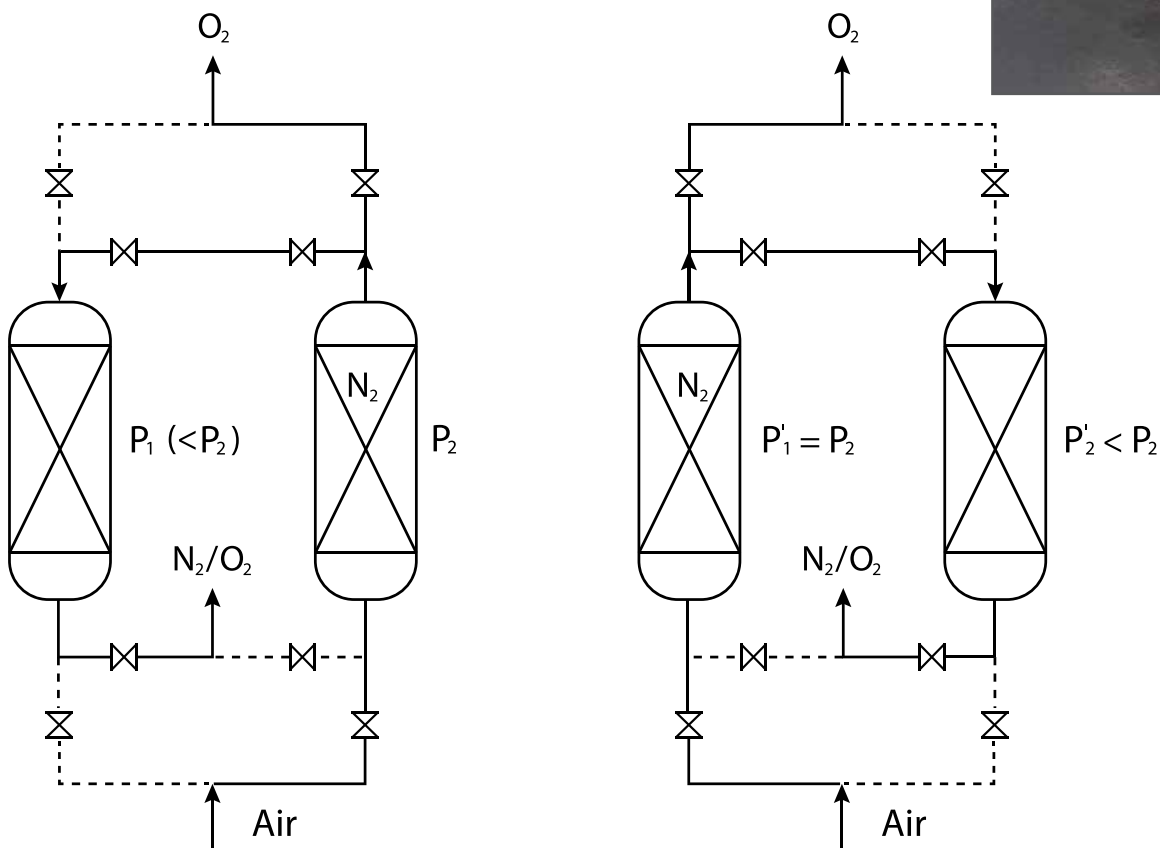
- We are bound up with the Medical Ethical Rules,
- We are people-oriented,
- We respect environment,
- We are creative,
- We are customer-oriented,
- We are innovative,
- We are pro-active,
- We believe in the team spirit.

Pressure Swing Adsorption Technology

Pressure Swing Adsorption (PSA) technology is used with specially developed adsorbents called zeolites to separate oxygen from nitrogen to be able to use pure oxygen in many applications.

First, air is compressed up to 7 bars with the help of compressors, then air is dried out to remove the moisture in the air. Filtration takes place thereafter to filter out the remaining particles, aerosol which is in the pressurized air stream.

PSA unit consists two tanks filled with zeolites. Each column undergoes cyclic sequence of pressurization, generation, equalization, and exhaust cycles for continuous flow of high purity oxygen.





PSA Advantages

- Reduction of oxygen cost
- Safe low-pressure oxygen usage instead of explosive high-pressure cryogenic cylinders
- Elimination of logistical and administrative operations
- Elimination of orders and deliveries
- Ready to use high technology solutions

Key Features of Oxyfresh

- Plug and Play
- Oil Free compressor set (230 ±5% V)
- UPS for up to 30 min standby
- After cooler fan
- Stainless Steel Air and Oxygen Tanks
- Stainless Steel Zeolite Tanks
- Medical Oxygen from 90% to 95% (95±1%)
- Fully Automatic 24/7
- Real time trends of process parameters
- Visual recommended service maintenance reminders
- Smart Algorithm (Generator automatically adjusts its purity regarding oxygen flow)
- Highest packing density of zeolites (specifically designed filling station)
- Uniform flow distribution design to maximize zeolite life
- Specifically designed Starting and Stopping points to protect purity from dropping
- Medical Grade Oxygen Filtration
- High Efficiency Molecular Sieve+
- Real Time Monitoring
- Recording Capabilities and Data Logging
- Multi-level secured access for supervisory control
- Top quality SMC valves and flow meter
- Medical Device CE
- 4-inch-Siemens Touch Panel and PLC set
- Water Separator, 1 micron, 0.01 micron and sterile filters
- User Friendly Interface
- Multi language



European Pharmacopoeia Requirements for Medical Oxygen 93

O ₂	93 ± 3 %
CO ₂	< 300 ppm
CO	< 5 ppm
NO _x	< 2 ppm
SO ₂	< 1 ppm
Oil	< 0.1 mg/m ³
Water	< 67 ppm

Capacities 90% - 95%

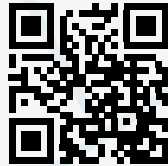
MODEL-#	Nm ³ /h	NL/min	Nm ³ /h	NL/min
OXYFRESH-30	1.2	20	1	16
OXYFRESH-50	2.4	40	2	32
OXYFRESH-70	3.6	60	3	48

- Performance at 20 °C and 1 bar atmospheric conditions.
- Required inlet compressed air quality is 1:4:1 according to ISO 8573-1.
- Purity and Capacity values may slightly change during the life time of the generator.
- Purity and Capacity values may slightly change depending on the atmospheric conditions.

Certificates and Brand Registry Documents

We believe that the way to the summit passes through high-quality and reliable manufacturing.





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Date : 05.08.2019

