

Ozone & Water Treatment



Oxymat at a glance

Oxymat is a Denmark based company specialized in designing and manufacturing on-site Oxygen and Nitrogen solutions, using Pressure Swing Adsorption (PSA) Technology. We have been designing, engineering and manufacturing Oxygen generator systems since 1978 and nitrogen systems since 2001. We possess first hand knowledge of the market, development, demands and possibilities the PSA technology holds. It is our mission to be your preferred innovative, dynamic and environmentally responsible supplier of on-site oxygen and nitrogen solutions worldwide.

Our team of more than 80 skilled and dedicated employees is based in 4 different locations:

- Denmark: Administration, Sales and Service
- Slovakia: Administration, R&D, Production, Project management, Sales and Service
- China: Administration, Sales and Service
- Colombia: Sales and Service

With more than 20 engineers (project managers, 3D CAD designers, automation engineers and experienced sales engineers) making sure we offer the right solution for any demand.

Through an ever ongoing process we are always focused on developing Oxymat to be cost-effective and ahead of the competition in terms of quality, performance and price. This strategy has made it possible to grow to the size and position Oxymat has in the market today. Our 2015 turnover was 20,1 mil. € and our product range is the most energy efficient in the market and even at a competitive price.

Our team of specialists will always be able to serve any demand. From our extensive standard industrial or marine programme to highly specialized turnkey projects, Oxymat will provide the quality solution. We offer a wide range of standardized control systems, and remote access and offer to tailor make automation solutions according to your requirement.

It is our priority to always deliver high quality products and services. Oxymat holds all relevant approvals for serving the numerous applications we supply.

- ISO 9001
- ISO 13485
- ISO 14001
- ISO 18001 (OHSAS)
- PED 97/23/EC Module B+D
- MDD 93/42/EEC (Medical Device Directive)

Marine Class societies - we can deliver according to the rules of:

- American Bureau of shipping
- Bureau Veritas
- Det Norske Veritas
- Germanischer Lloyd
- Lloyd's Register
- Nippon Kaiji Kyokai
- RINA

Bringing Nitrogen & Oxygen Generator Systems to Your Business

Why Oxymat PSA generators are the wise choice?

At Oxymat, we only see challenges - not problems! No matter your need or application we can provide state-of-the-art design to meet your requirements. Our wide range of standard generator systems supplies:

- Oxygen from 0,6 to 2000 m³/h purities up to 95% (60TPD)
- Nitrogen from 0,3 to 10000 m³/h with purities up to 99,9999% (300TPD)

Unique Oxymat design features include:

- High performance top quality solutions
- Low energy consumption
(from 0,2kW/m³ Nitrogen and from 1,0 kW/m³ Oxygen)
- Low CO₂ emission
- Heavy duty construction designed for rough conditions and industrial use
- High quality & durable components
- 3D design
- Optional container or Frame-built design
- Design and customization, to meet any specification
- Plug and play installation
- High quality touch screen control unit
- Remote control access
- Optional delivery as "own brand" OEM solution fully implemented with your system.
- Specialist support from planning, installation and operation of your project
- Oxymat is approved and recognized as a quality supplier by major gas companies

The essence of PSA

The PSA process is an extremely clean operation and the only 'raw material' is air.

On-site generators allow for an uninterrupted supply of gas with a high purity output. This means that you can produce gas where and when you need it, and in the exact quantity and quality you need.

Worldwide manufacturer

More than 3500 Oxymat generator systems are currently in operation around the world.

To provide first class aftermarket service, we have a team of four service technicians, always ready to make sure your equipment stays in good condition. Our service team can be reached 24 hours 7 days a week.

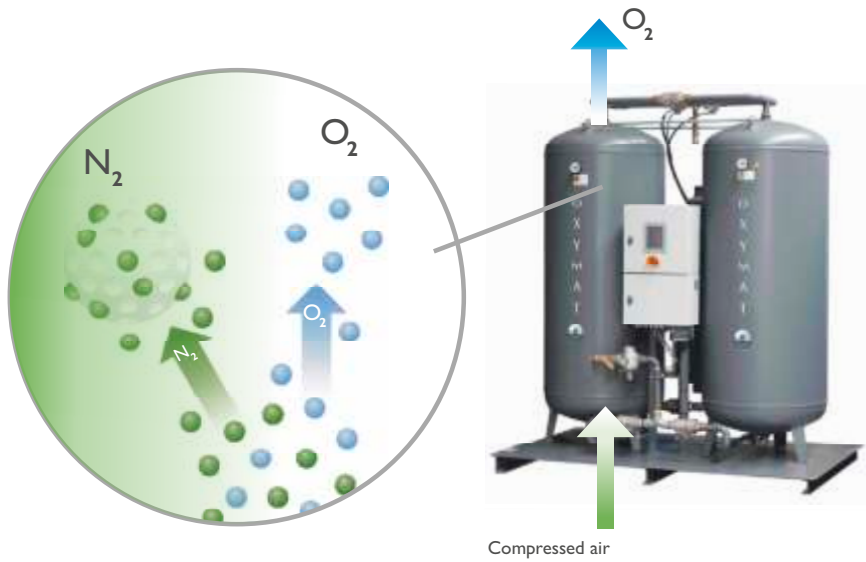
Our products and services are well known around the world, and via our extensive network of more than 100 distributors and agents worldwide, you are never far from qualified feedback, when it comes to onsite gas solutions.

Some of the industries we have served so far...

Medical	Laser cutting	Petrochemical
Food and Beverage	Electronics	Marine & Offshore
Process Industry	Aquaculture & Ozone	Goldmining

...and waiting to serve yours.

Technology / Process description



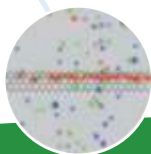
Our generators are very easy to operate and require a minimum of maintenance and service. OxyMat uses only high quality components and our systems are designed for 24 hours, 365 days a year operation. An Oxygen generator combined with cylinder back up gives the highest level of safety. In comparison with cylinders it gives overall cost reduction up to 80%. The average oxygen production cost is 1.1kWh per cubic meter of oxygen.



Compressor
increases air compression to required pressure level



Dryer
removes moisture from air (air humidity) by cooling



Coal tower
adsorbs fractional impurities (oil)



Air tank
accumulates necessary volume of air for PSA generator



Zeolite
filling with its ion-exchange bed traps N_2 molecules and allows O_2 molecules to stream through



High Purity Oxygen
flows from PSA generator to product tank and is ready for use

O₂ for your O₃, Ozone

Ozone

Ozone is a highly effective method for bacteriological treatment and useful in a variety of everyday situations from removing odor to ensuring clean, high quality drinking water from the tap.

But O₃ is more than just effective. It is also environmentally safe, which makes it highly suitable for treating water in enormous quantities; both drinking water and industrial waste water, i.e. in industrial slaughterhouses.

Ozone production

Ozone is very reactive and unstable. It cannot be stored and has to be produced where and when it is needed. Using oxygen (O₂) as feed-gas allows the ozone generators to break down some of the O₂ molecules into free oxygen molecules, which immediately attacks existing O₂ molecules and forms ozone (O₃).

Ozone is used in a variety of applications:

- Poultry farming
Drinking water for animals. Cleaning of equipment. Washing of chicken before packing.
- Cold storage
Ozone application to ambient air in storage room. Deodorization.
- Deodorizing (odour elimination)
Oxidising the odor molecules in the air of process environment.
- Swimming Pools
Replacing chloride with ozone in pool water treatment.
- Meat processing
Drinking water of animals. Cleaning of equipment. Washing of meat before packing.
- Agriculture and livestock
Drinking water for animals. Cleaning of equipment.



„At LST we design and produce Ecological Ozone Generation systems for the textile industry worldwide. We have been using Oxymat Oxygen Generators to feed our systems for several years and we have always been very happy with their reliability and efficiency.”

Melih Özcelik, CEO
LST Lazer Sistemleri Teknolojisi San. ve Tic.A.S.

Water Treatment

Drinking Water

Clean drinking water is vital for our survival. After retrieving the water from the underground it is normally filtered and oxidised and being pumped directly to the end user.

Oxygen can be used for your waste water treatment and as feed gas for your ozone system. Adding oxygen directly into the waste water increases the efficiency of removing pollutants.

Waste Water

Waste water comes from households, industries, companies and institutions. The waste water is cleaned in special plants, which breaks down and removes polluting particles. The cleaned waste water is then led back to nature in stream, lakes, the ocean or to the undergrounds.

Treatment and cleaning of waste water is a complex process, in which ozone plays an important role. At Oxymat, we offer oxygen feed gas plants for Ozone and waste water.

Aqua Culture

Our oxygen generators can also be used in fish farming. In recirculation, closed systems oxygen helps increasing fish density and minimizes illnesses at the farm.

Textile Industry

The traditional bleaching process uses considerable amounts of water, chemicals and energy in textile industry. Ozone Generators are used in modern jeans/garment producers for a more environmental friendly process. The modern process eliminates the use of chemicals, reduces the water consumption down to 90% and energy consumption down to 50%.

Oxygen from Oxymat PSA Generators is the most reliable and economical source for the latest technology ozone systems used in bleaching for the textile laundries.

Our oxygen generator plants are highly cost effective and low in energy use.

The OXYMAT® units are available in 45 standard models with capacity in the range from 0,6 to 2000 m³/h purities up to 95% (60TPD).



Oxymat Installations



* Installations counted from 2005

- World Wide



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Highest level of international approval

Oxymat Medical systems are designed and manufactured according to:

- MDD(63/42EEC) Medical Devices Directive
- US Pharmacopoeia
- European Pharmacopoeia
- ISO 10083

Oxymat has long experience in design, engineering and delivery of thousands of oxygen systems all over the world, in accordance with international and national authorities.

Oxymat operates a QA system in accordance with EN ISO 9001:2000 and is certified by Apragaz.

- ISO 13485
- ISO 14001
- ISO 18001(OHSAS)

