

# Gas & Oil



Worldwide Manufacturer of PSA Generators

# Short about company

Oxymat is a Danish 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, developments 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 60 skilled and dedicated employees, based in 3 different locations:

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

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 2010 turnover was 11 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 can offer to tailor made 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 9001:2008

ISO 13485:2004

ISO 14001:2004/2007

PED 97/23/EC Module B+D

MDD 97/42/EC (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. In close corporation with our increasing Number of medical customers, we have designed and developed a product line specifically for this application.

Product range includes models supplying from 0,27 to 6000 m<sup>3</sup>/h.

Special design features include:

- Low CO<sub>2</sub> emission
- Heavy duty construction designed for rough conditions
- High quality & durable components
- Container installed systems
- Frame-built design
- Trouble-free installation
- High quality Touch Screen Control Unit (Customized control system)
- Remote Control Access
- Specialist support from planning, installation and operation of your project

## 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. In other words; you become selfsufficient and you no longer have to rely on delivery from external suppliers.

## Worldwide manufacturer

More than 2000 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.

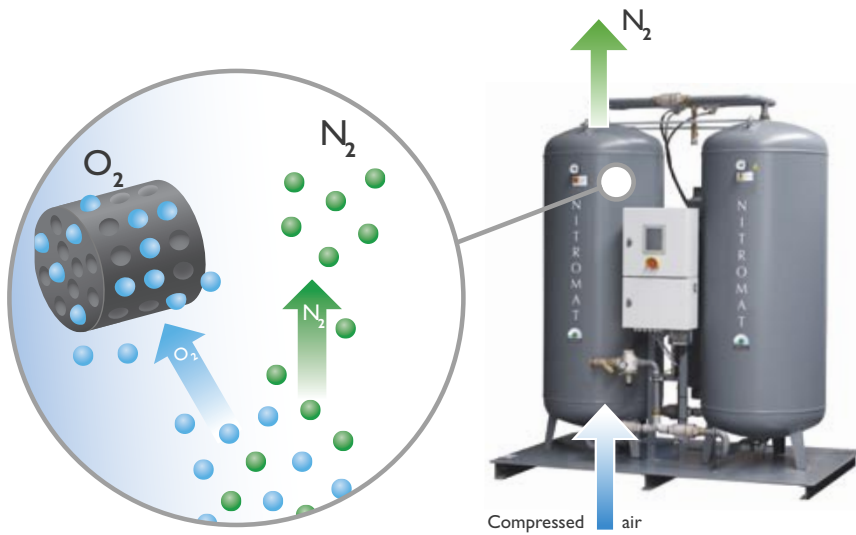
Our products and services are well known around the world, and via our extensive network of more than 100 distributors and agents worldwide, you are never far from qualified feedback, when it comes to onsite gas solutions.

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

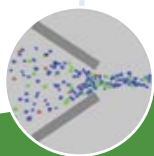
Medical	Laser cutting	Petrochemical
Food and Beverage	Electronics	Marine & Offshore
Process Industry	Aquaculture & Ozone	Goldmining

...and waiting to serve yours.

# Technology / Process description



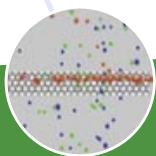
Our generators are very easy to operate and require a minimum of maintenance and service. Oxymat uses only high quality components and our systems are designed for 24 hours, 365 days a year operation. A Nitrogen generator combined with cylinder back up gives the highest level of safety. In comparison with cylinders it gives overall cost reduction up to 80%.



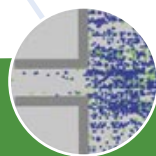
**Compressor**  
increases air to required level of pressure



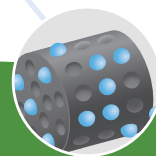
**Dryer**  
removes moisture from air (air humidity) by cooling



**Coal tower**  
adsorbs harmful organic impurities such as oil vapours and hydrocarbon compounds



**Air tank**  
accumulates necessary volume of air for PSA generator



**CMS**  
filling with its beds traps Oxygen molecules and allows Nitrogen molecules to stream through



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

# Technical Features



## **Nitrogen Buffer**



- Because of our special process design no external nitrogen buffer is need, all is on the foot print.

## **Control**



- With simple and easy to use touch screen, self diagnosing, only one wire from instrument to PLC, easy internet access, you can have screens where ever you like in CCR, in ECR and on bridge in fully compliance with class rules.

## **Optional Nitrogen padding Down to 20 ppm**



- If you chose our nitrogen padding solution, you do not need to equip your vessel with Nitrogen bottles.
- We can offer you down to 20 ppm purity and the best is that changeover from 5 % production to 20 ppm
- Takes less than 20 minutes. A special oxygen sensor cabinet is delivered to monitor precise and reliable readings from 2 to 1000 ppm.

## **No Need for Air Vessels**

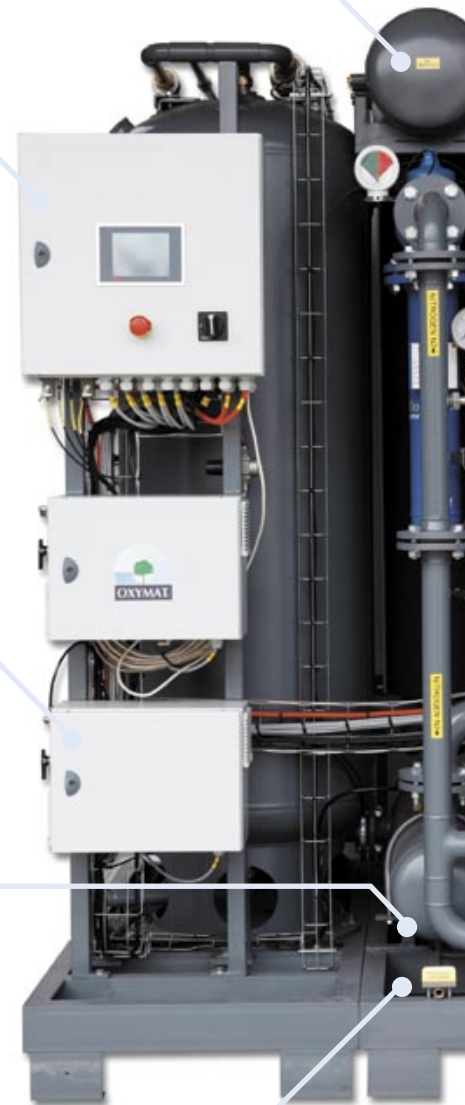


- Oxyamat has minimized air vessel to a pipe due to our special process design, this is one of the reasons
- We say „smallest footprint in world“

## **Central Drain System**



- The PSA skid has central pipes for sludge, so you have only one connection point to the PSA.





### **Filter Control**



- Our filters are equipped with filteralarm, you will be told when to change the element.

### **Flow Meter**



- We do always equip our marine systems with flow meters it gives you full control of your cargo operations

### **Optional Dry Air By Pass**



- If you need dry air with an atmospheric dew point of  $-20^{\circ}\text{C}$  you can use the Nitrogen Systems existing compressors.

### **Compressed Air In**



- Simple Flange connection to ease your job

### **Flow Control**



- All our PSA is as standard equipped with flow control system, you can set the flow on our touch screen and can choose all settings from 0 to maximum capacity.





- **Distributors**
- **Nitrogen Plants**
- **Oxygen Plants**

The sky is the limit when it comes to the type of industry Oxymat PSA generators serve.

While the bulk of our generators are used in marine and offshore, medical and aquaculture, we also serve many other interesting sectors.

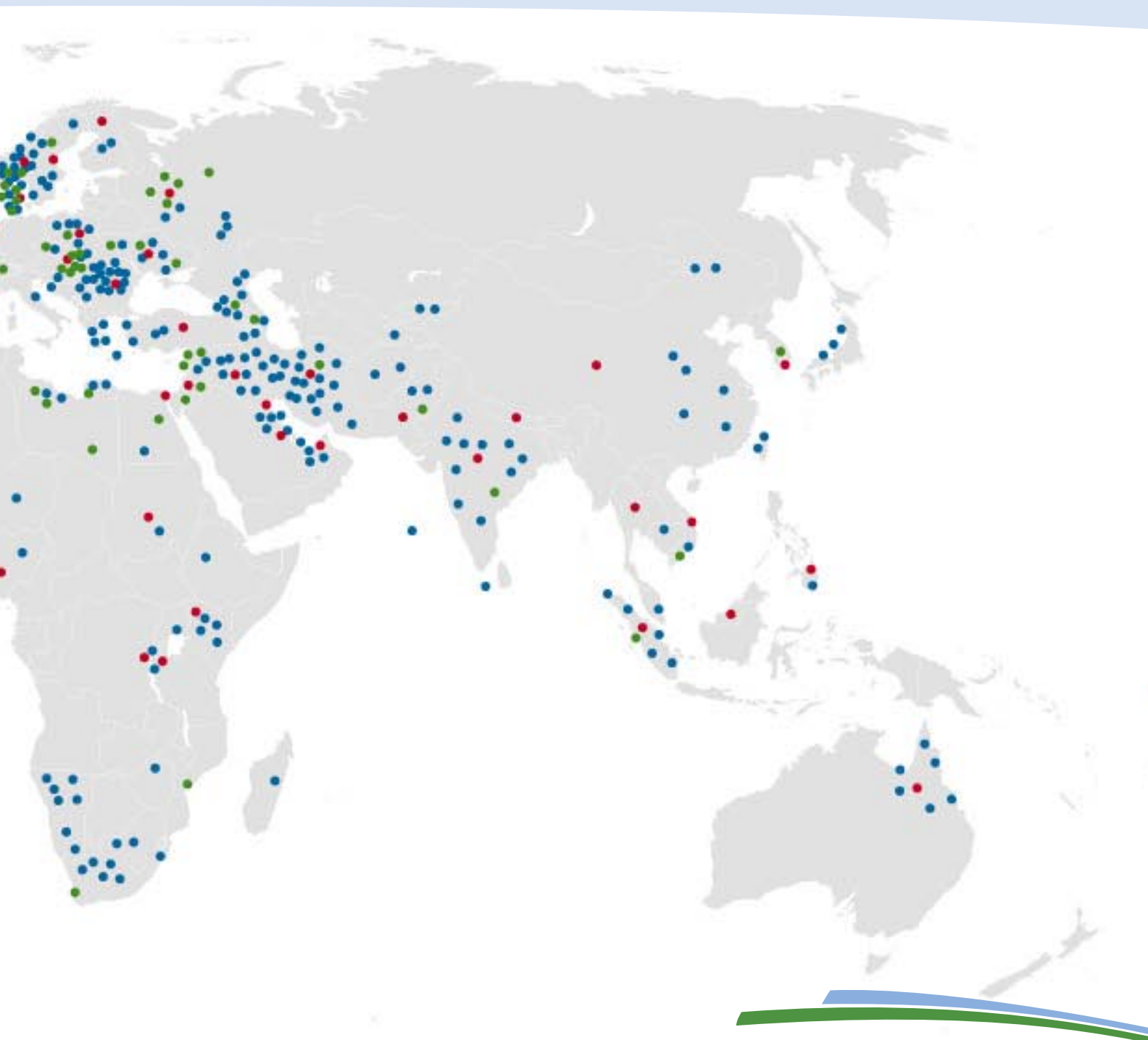
Oxygen generators, for instance, are used in areas ranging from glass work, mining and ozone production to steel and metal cutting and waste water treatment.

The range of use for nitrogen generators is just as wide ranging from petro-chemical and oil industry to electronics and food and beverage.

Oxymat products can be found in all corners of the world, from Asia, Africa and Australia to South America and Europe.

We embrace new challenges and out-of-the-box solutions are designed and developed to serve any need.

Through the years this approach has resulted in state-of-the-art solutions ranging from field hospital filling stations for NATO and Swedish Nuclear power stations to gold mines in Sahara and hospitals in Greenland.



We know that service plays a key role to PSA generator systems, from project start-up to evaluation, and throughout the life-span of the generator system. Once installed our customers rightly expect the generator operate flawlessly and we know that any unforeseen problems can have an immediate and major impact to running any business, whether it is fish farm, an oil tanker or a medical facility. Our highly educated specialist can travel worldwide at short notice. At headquarters in Denmark and branches in Slovakia and China they have a call centre with technically trained staff on duty 24 hours a day.

In addition to our call centre, we have a global network of skilled partners and distributors, who

are always at your service, whether your demand is finding an answer to a simple question or helping you, solve a complex issue. Our customers are always our top priority.

Our extensive spare part program ensures day-to-day delivery of high quality original spare parts throughout the lifetime of your plant.

**Service agreements**

Oxymat Service Agreements are the easiest and best way to ensure you keep the system in perfect working condition. This way, you make sure you will always have the unique performance and reliability that comes with every Oxymat system.

**Oxymat A/S (HQ)**

Fasanvej 18-20, DK-3200 Helsingør  
Denmark

**Oxymat Slovakia**

Vadovce 87, SK 916 13 Vadovce  
Slovakia

**Oxymat China**

Zhaofeng Road Huaqiao, BC Yatai Plaza  
Kunshan, China

T: +45 48 79 78 11

F: +45 48 79 78 13

M: sales@oxymat.com

W: www.oxymat.com



## Highest level of international approval

Oxymat Nitrogen systems are designed and manufactured according to :

- PED(97/23/EC)

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

Oxymat operates management systems in accordance with international standards

- ISO 9001 (Quality Management Systems)
  - ISO 14001 (Environmental Management Systems)
- certified by Apragaz.

