



Oxymat Medical Oxygen Systems





Company preview

Oxymat A/S is a manufacturer of Oxygen & Nitrogen Generator systems.

Oxymat A/S is a Danish company with HQ located just north of Copenhagen.

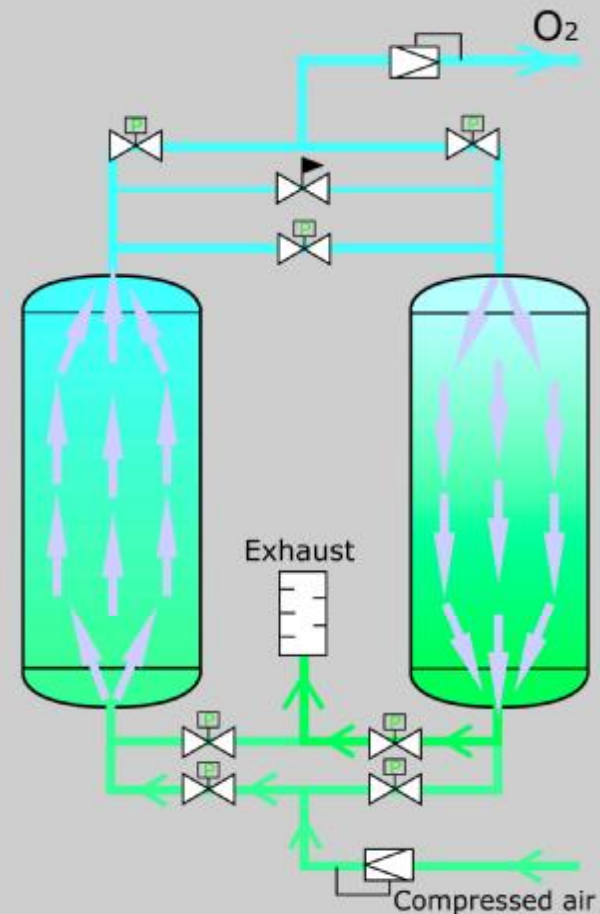
Oxymat A/S has manufactured PSA Oxygen Generator Systems since 1978 and it has more than than 500 PSA plants working all over the world. We deliver systems worldwide including training and commissioning.





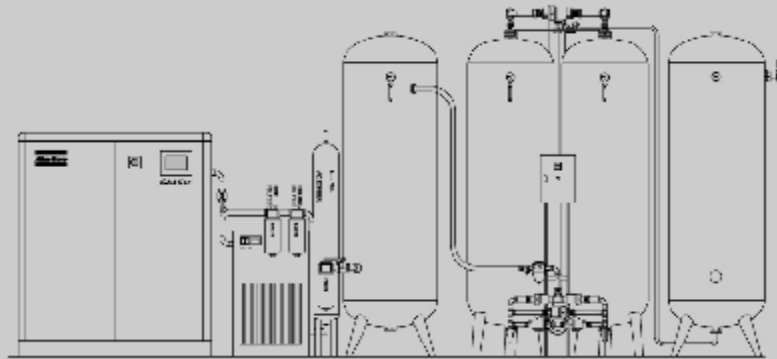
Pressure Swing Adsorption

- With two adsorber vessels with zeolit, the plant delivers oxygen continuously to the oxygen receiver.
- During pressurization of one column, zeolit adsorbs nitrogen and oxygen will pass through to the oxygen receiver.
- Oxymat PSA systems are based on well-proven technology. Valves are axial type ready for operating minimum 8.000 hours between service.
- Vessels are manufactured after PED 97/23/ED





The O₂ System in principal



The system consists of (from left to right):

- Heavy duty screw compressor (Atlas Copco, Kaeser)
 - Refrigeration Dryer with sub- and micro filtration down to 0,1 micron
 - Active Coalescing Tower for 100 % oil removal with micro filtration
 - Air receiver in proper sizing
 - PSA Oxygen Generator with PLC-control and oxygen monitor
 - Oxygen Receiver
 - Micro and bacterial filtration
- ü All systems can be expanded with an oxygen compressor up to 200 bar(g) and filling stations for oxygen cylinders



Medical PSA Systems

- Manufactured in accordance with **ISO 10.083** standards
- Design Purity is **95 % +/- 1%**
- Outlet pressure from PSA unit is **4 bar(g)**; can be modified
- Filtration units such as coalescing tower and sterile filtration of the gas included
- All systems can be expanded with cylinder filling options
- Connectable with hospital piping system
- Systems up to **26 Nm³/hour** can be delivered as **Plug and Play**

From small plug and play units...



...to Large PSA units installed on site



Design your own system

1st Step: Add Oxygen filling station

Oxygen filling station (OFS) is fills cylinders with oxygen under 150 to 200 bar pressure.

§ The unit can be placed outside the hospital. Oxygen cylinders filled here can then be deliver to a hospital or a number of hospitals.

§ Include OFS to your unit and fills your own cylinders in the time of low consumption; then use the cylinders as a backup or during peak consumption





Design your own system

2nd Step: Container Solution vs. Standalone Unit



- ü Plug and Play
- ü Easy to transport



- ü Economical
- ü Easier servicing



Design your own system

3rd Step: Comply your system with the ISO 10083 standard

§ 2 line PSA system

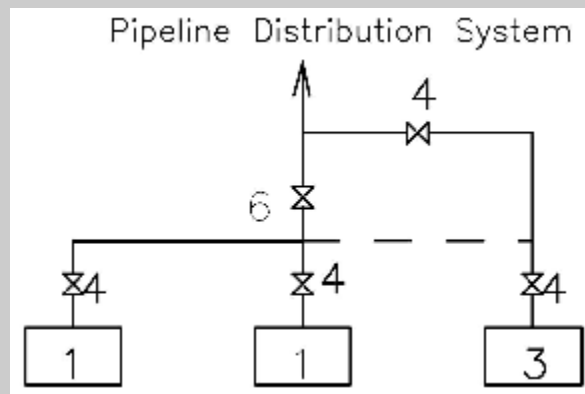
§ Cylinder bank backup

§ PLC Control with finger touch screen for flow, pressure and purity control

§ Automatic start up of the 2nd oxygen line if consumption is higher than the capacity of one line.

§ Warnings are given if oxygen bank is used.

§ Scada software can be delivered to central control rooms



1 Oxygen generator

3 Two banks of high pressure cylinders

4 Source system shut-off valve

6 Supply system shut-off valve



Design your own system

4th Step: Tailor made control solution

Oxymat has a highly skilled electrical engineers to design any control system that you require.

Examples:

- Oxymat Touch Screens are the most advanced solutions on the market. When a valve breaks down, the system detects it and immediately sends a message to the screen.
- GSM - When the system detect an error, a SMS with an error notification will be generated and send to your mobile.
- Measuring purity, flow, pressure or additional variables according to your needs
- Transferring data to your system
- Monitoring over internet and more





Why Choose Oxymat Systems

Key Benefits:

- **Safe delivery;** independency of gas companies
- **Economy;** decrease in oxygen cost
- **Labour;** no handling of oxygen cylinders

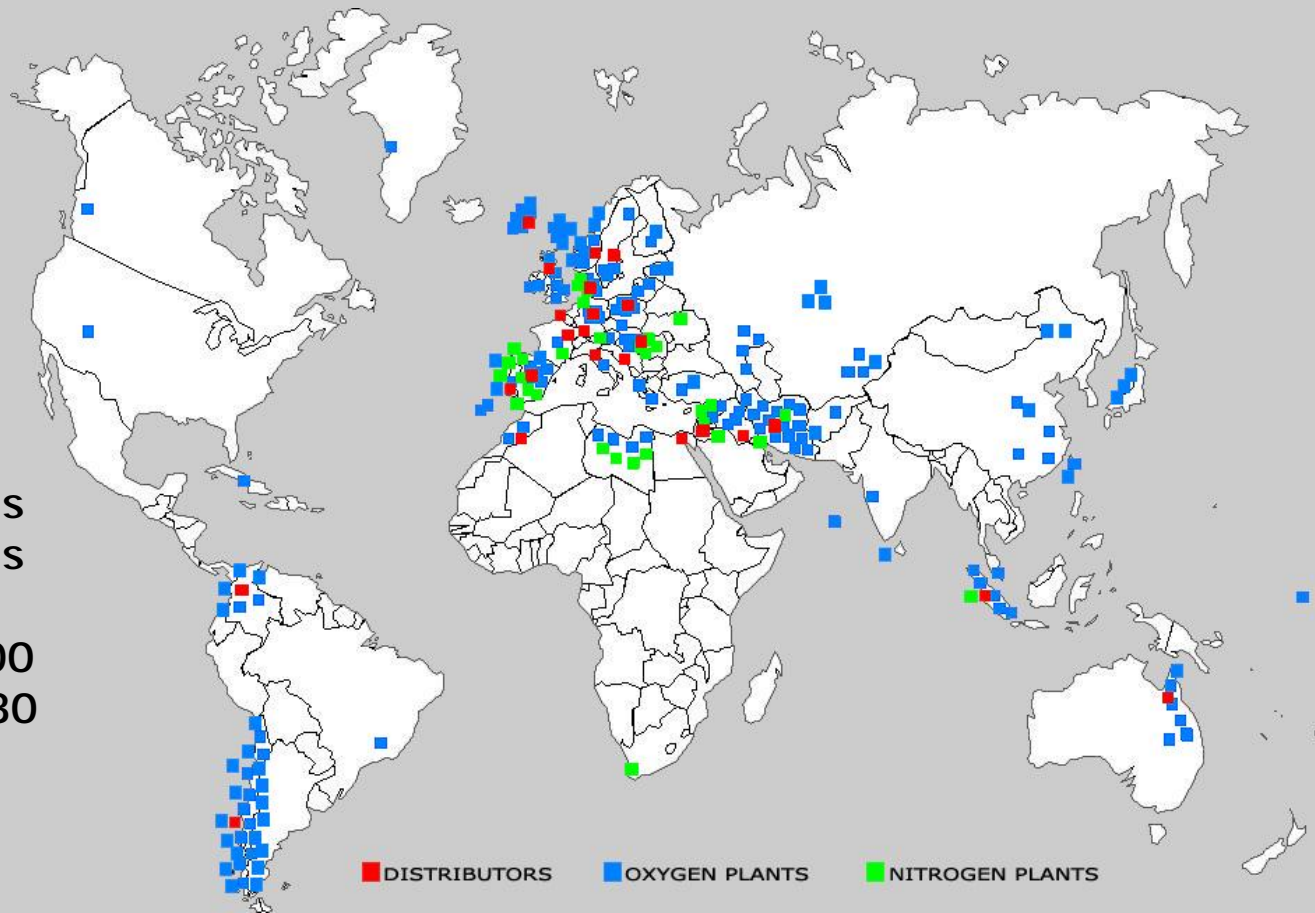
Oxymat design is well proven and made of high quality components



References

1999: 28 PSA plants
2000: 34 PSA plants
2001: 36 PSA plants
2002: 50 PSA plants
2003: 34 PSA plants
2004: 76 PSA plants
2005: 101 PSA plants
2006: 200 PSA plants

Totally more than 600
PSA-plants since 1980





Models

Oxymat has 28 oxygen generators from 0,6 – 240 Nm³/hour.

Oxymat has developed 5 standard systems for hospital applications:

- 1,6 Nm³/hour, 150 bar(g) = 6 cylinders/day
- 3.2 Nm³/hour, 150 bar(g) = 13 cylinders/day
- 16 Nm³/hour, 170 bar(g) = 64 cylindes/day
- 26 Nm³/hour, 200 bar(g) = 104 cylinders/day
- 36 Nm³/hour, 150 bar(g) = 144 cylinders/day

Oxymat produces larger systems on request