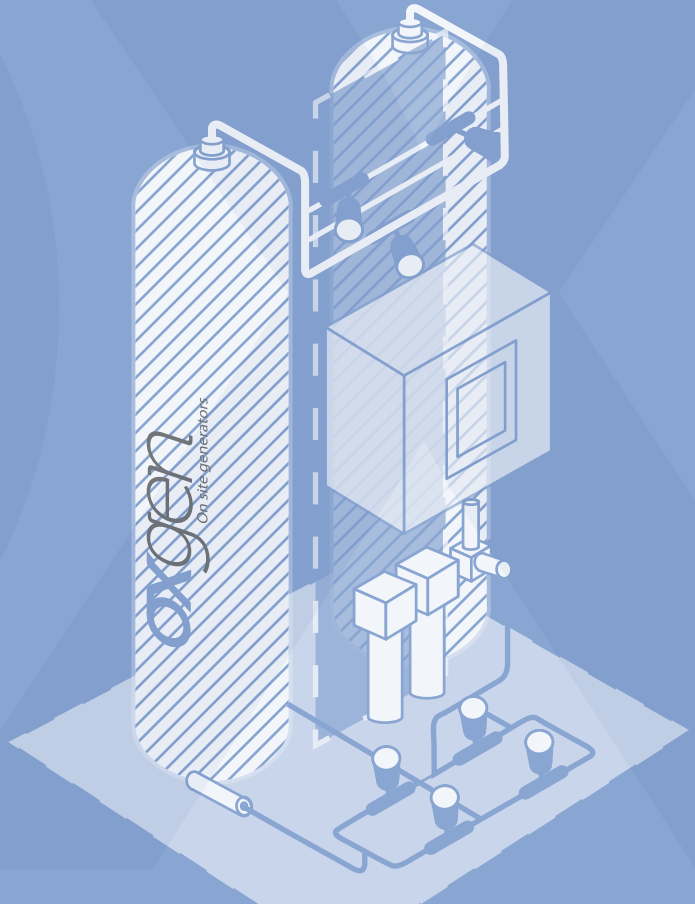


oxgen

On site generators





All you need
is in the **air**.

Who are we

OxGen is a leading engineer, manufacturer and marketer of innovative, performing, modular and first-class quality oxygen generators, offering one-stop-shop customer experience for ultra safe, reliable and state-of-the-art oxygen generators and plants as well as related services and solutions for medical, veterinary and other applications.

OxGen holds state of the art knowledge of PSA technology and its development in the marketplace, with a declared mission to be the supplier of choice for providing innovative (performance and quality) and cost effective onsite oxygen generator solutions worldwide.

Where We Are

OxGen headquarters and main operations are based in Milan area (Italy), counting on a large network of distributors and agents, OxGen sells in over 60 countries.

What We Offer

Having had access to more than 30 years of business experience in the field of high pressure gases for medical, veterinary and other applications, OxGen can deliver the right solution for any demand of oxygen generators and plants.

OxGen customer-oriented accessibility is the platform upon which it is based its flexibility and ability to service its customers and partners worldwide.



OxGen offers one-stop-shop customer experience for ultra safe, reliable and state-of-the-art oxygen generators and plants as well as related services and solutions:



OxGen is a leading engineer, manufacturer and marketer of innovative, performing, modular and first-class quality oxygen generators, including plants and systems;



OxGen integrates in its offer for medical applications a large array of services and support, including consulting, in accordance with Normative references, on system design [with inclusion of extension and modifications of existing oxygen pipeline systems] and systems components, safety, materials, general requirements, installation and maintenance as well after sales support, with inclusion of spare parts supply;



OxGen provides seamless integration capabilities to connect its oxygen generators and plants to existing piped oxygen distribution systems, overseeing all topics related to technical, risk and operational management;



OxGen products and services are designed and manufactured in Italy and they are worldwide delivered through a large distribution and local support network of dealers and agents;



OxGen sells high quality products and services holding all relevant approvals (ISO 9001, ISO 7396.1, ISO 10083; PED 97/23/EC Module B+D, MDD 93/42/EEC).

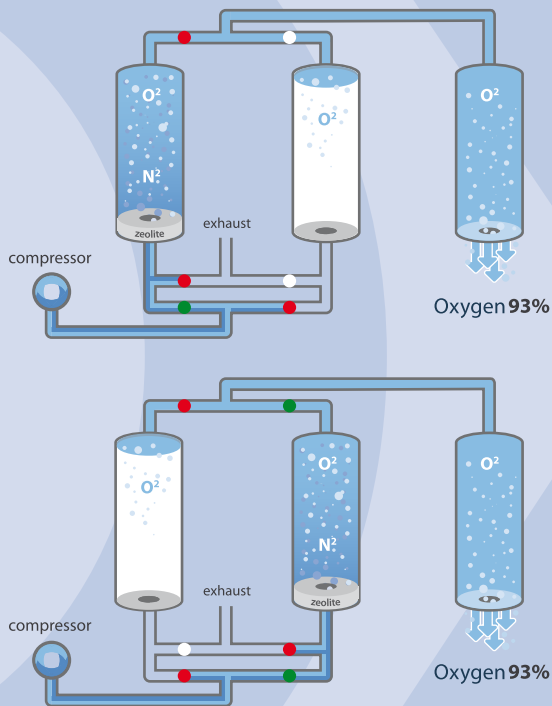
Technology

OxGen oxygen generators work as following:

- OxGen uses two columns with molecular sieves to ensure continuous production;
- Compressed air, opportunely filtered and dried, is blown through a valve to the vessel where the pressure is built to reach 7 to 10 bar(g). Nitrogen is tied to a molecular sieve during the building of pressure, and the oxygen is allowed to pass through to the accumulation tank;
- While pressure is build in one vessel, the second remains without pressure;
- A part of the produced gas is used for regeneration of the molecular sieve;
- The molecular sieve is fully regenerative with long lasting life span.

OxGen end-to-end PSA source of oxygen 93% for medicinal use can be subdivided into:

- Compressed air system
(Air compressor, refrigeration dryer, activated carbon tower, air receiver)
- PSA oxygen concentrator unit
- Oxygen 93% receiver



Product range

OxGen oxygen generators are CE certified in accordance with MDD (medical device directive) and PED (pressure equipment directive), complying as well with ISO 7396.1 and ISO 10083.

OxGen oxygen generators reach outlet pressure up to 8 barG. OxGen can provide tailored-made solutions matching exact customer requirements, including skid mounting and container, GSM modem, remote monitoring. OxGen engineers and installs oxygen generating systems with all proper capabilities, monitoring and alarm system to fulfill any at all local safety requirements. OxGen units are equipped with an end-to-end controller monitoring, which is user friendly, performs automatic calls alarms and switches to back up supply when malfunctioning occurs.

OxGen oxygen generating systems are designed for 24 hour, 365 days operations. They feature automatic restart and can integrate filling back up to provide safe delivery of gas to hospital pipeline systems.

OxGen oxygen generating systems guarantee low operating costs, with an average consumption of 1.2 kWh per cubic meter of oxygen 93% produced.

- OxGen units are available in 21 standard models with capacity in the range from 1 to 75 Nm³/hour;
- Other capacities are available on request;
- The purity of gas produced is in accordance with European Pharmacopoeia monograph for Oxygen 93%;
- OxGen can supply on request skid mounting (plug & play) or container built solutions, buffer vessels, filters, advanced control, dew point, pressure, temperature, flow, purity and remote monitoring included;
- OxGen can supply a wide range of cylinders filling stations fully equipped with high pressure boosters, cylinders, fittings connections, valves, racks and other accessories.

Please refer to our website www.oxgen.it for detailed and updated information.

Service and support

OxGen is committed to providing assistance in the choice and management of all elements and additional services for the generation of oxygen, including consulting, in accordance with Normative references, on system design [with inclusion of extension and modifications of existing oxygen pipeline systems] and systems components, safety, materials, general requirements, installation and maintenance as well after sales support, with inclusion of spare parts.

OxGen support and assistance encompasses systems general requirements topics, with inclusion of capacity and storage, continuity of supply, maintenance, location, monitoring and alarm systems, testing, commissioning and certification.

OxGen offer one-stop-shop customer experience to satisfy at 360° every specific need of its worldwide customer base, from the design and engineering phase, for specific tenders, aligning with the continuous updating of the specific standards in force, to the production and manufacturing phases, including post sales assistance and installation, while ensuring the most advanced safety requirements in each of these phases.

Technical consultancy

OxGen provide seamless integration capabilities to connect its oxygen generators and plants to existing piped oxygen distribution systems to maximize investment return while contemporarily minimize operating impact on operations.

OxGen technical department provides a qualified consulting service for designing and sizing of oxygen production unit in accordance with present configuration of existing pipeline systems for the distribution of oxygen and provide adequate support for the proper integration of generating oxygen unit and existing pipeline systems, with the inclusion of inspection and control during construction, testing in accordance with current regulatory environment. OxGen technical consultancy encompasses risk and operational management topics in accordance with relevant international standards.

OxGen technical consultancy in risk management covers the topics of risk management check list and risk management procedures, when extensions, modifications or upgrading of existing installations has occurred as a result of installation of an oxygen concentrator and/or oxygen plant upgrade.

OxGen technical consultancy in operational management covers the topics of statutory requirements, functional responsibilities, operational procedures, training and communications, management of sources of oxygen supply, preventive maintenance and repair and risk assessment, giving definitions and working practices throughout, when extensions, modifications or upgrading of existing installations has occurred as a result of installation of an oxygen concentrator and/or oxygen plant upgrade.

Generating System with PSA concentrator (ISO 10083, ISO 7396-1)

OxGen may supply end-to-end PSA based oxygen generator supply systems in many different configurations.

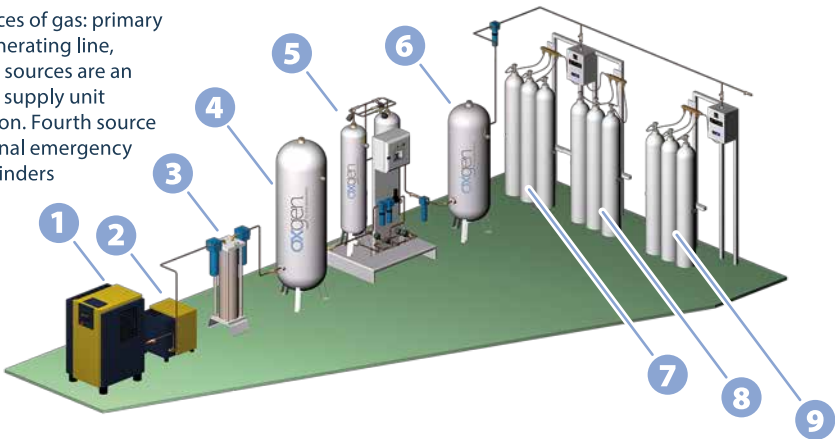
Typical layout in accordance to relevant international standards is indicated in the following table:

Primary source of supply	Secondary source of supply	Reserve source of supply	4 th source of supply (optional)
PSA	cylinders supply unit	cylinders supply unit	cylinders supply unit
PSA	PSA	cylinders supply unit	cylinders supply unit

Further configurations are available upon request.

Example of a typical onsite gas generating system with oxygen generator as primary source of supply and cylinders as secondary, reserve and fourth sources of supply.

This system has 3 sources of gas: primary source oxygen PSA generating line, secondary and reserve sources are an automatic changeover supply unit cylinders decompression. Fourth source (optional) is an additional emergency reserve supply unit cylinders decompression.



1 Air Compressor

It ensures the feed air necessary to start the oxygen 93% production

2 Air Dryer

It removes moisture from air (air humidity) by cooling to ensure that air inlet quality is in accordance with relevant international standards for humidity

3 Activated carbon tower

It adsorbs harmful organic impurities such as oil vapors and hydrocarbon compounds ensuring that air quality is in accordance with relevant international standards for oil residual content

4 Air receiver

It accumulates necessary volume of air for PSA generator

5 PSA - Oxygen 93% generator unit (primary source of supply)

By means of a physical-chemical process automatically driven by a PLC, it allows the production of Oxygen 93%

6 Oxygen 93% storage tank

It accumulates necessary volume of Oxygen 93% from PSA generator

7 Cylinders secondary source of supply

It ensures the continuity of supply in the event of failure of the PSA generator

8 Cylinders reserve source of supply

It ensures the continuity of supply in the event of failure of primary and secondary sources of supply

9 Cylinders Emergency reserve source of supply (optional)

It ensures the continuity of supply in the event of failure of primary, secondary and reserve sources of supply

Apart from the above example, OxGen can also engineer further system configurations (e.g. with two lines PSA as primary and secondary sources of supply and cylinders as reserve source or other customized requested configurations).

Veterinary application

"Think of it as a Self-Refilling Oxygen Tank. Performs just like bottled Oxygen without the hazards and rising costs."

"Is there a proven solution that reduces my liability risk, lowers my monthly operating and maintenance cost and delivers maximum performance at the same time?"

"The simplest way to describe this exciting new advancement in Oxygen technology is a comparison to a common household heating & air-conditioning unit."

- It serves the entire veterinary hospital
- It is centrally located
- It runs automatically
- Routine maintenance requires changing or cleaning a few small filters
- It's quiet, safe, and energy efficient

A long experience in on-site gas production has enabled OxGen to design a specific range of oxygen generators especially dedicated to veterinaries.

Oxygen generators are being used more and more as an alternative to using high pressure and costly oxygen cylinders, reducing manual handling and therefore increasing safety, as well as ensuring a reliable supply.

OxGen generators help the veterinarian devoting himself to his very activity without losing time managing the stock of cylinders:



Fully autonomy

No more oxygen supply constraint



High security level

No heavy cylinders to handle, no high pressure storage, no rupture of supply chain, no fire risk



Easy maintenance

Very light maintenance required



Easy operation

Fully automatic, just plug it in, turn it on and set the desired pressure and flow



Cost saving

The investment in an oxygen generator solution is usually recovered within 2 years

Please refer to our website www.oxgen.it for detailed and updated information

Therapy in Veterinary Medicine

Oxygenation is a relatively new method that veterinarians are using today to treat wounded or chronically ill animals. This exciting treatment accelerates normal post-operative healing and increases the benefits of many antibiotics by improving their tissue penetration. Thus it improves the veterinary business.

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