

PO₂ Series

Medical Oxygen Generators



Pneutech



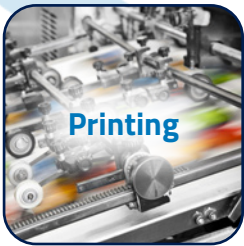
ECO-FRIENDLY

Efficiency Under Pressure



Industries Served

PO₂ Series

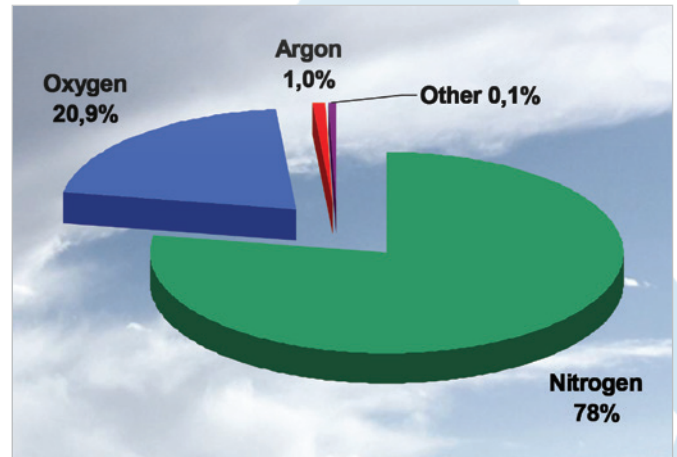


Continuous & Convenient

Approximately 21% of the atmosphere around us is comprised of Oxygen.

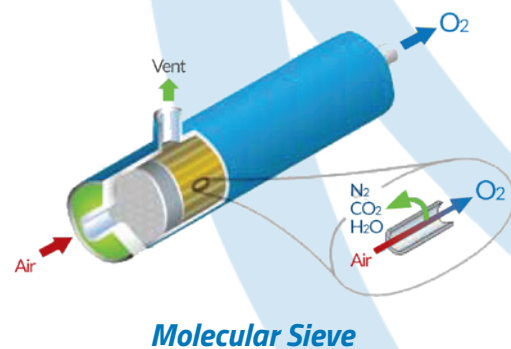
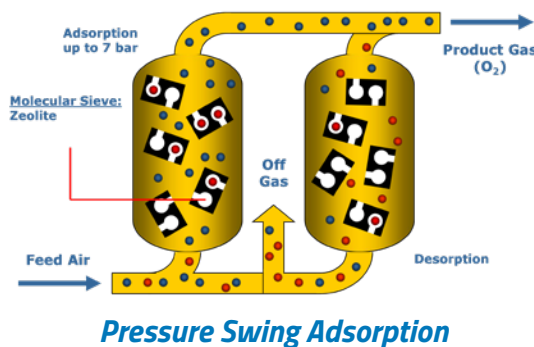
All we need to do is harness this resource for a continuous and convenient on-tap supply line.

At a relatively low cost (approximately \$0.80/m³) this Oxygen gas can be separated out and used in its purest form for medical gas and other industrial process requirements such as laser cutting, gas cutting, and welding.



Separation Process

To enable this valuable gas to be utilised, it first needs to be separated out from the atmosphere, and then refined to acceptable purity levels. The PneuTech PSA (Pressure Swing Adsorption) Oxygen generators use carbon molecular sieves to separate and process Oxygen gas to a purity of 95%.



The PneuTech PO₂ Generator Series offer the true benefit of a pure onsite gas supply. Where and when you require it and at a price that you can afford.

Oxygen is a colourless, odourless, and tasteless gas made up of two atoms.

The human body is comprised of approximately 60% Oxygen gas, and it is essential to our respiratory systems, providing the basis for metabolism.

In the event that our lungs are unable to operate sufficiently, a pure and reliable supply of Oxygen gas can be administered by way of a face mask or ventilator to support our breathing.





The PneuTech PO₂ System utilises the Twin Tower PSA System, absorbing the Nitrogen and unwanted gases from the air intake producing a pure supply of Oxygen gas.

Unlike the standard twin tower series, the modular series achieves high purities and constant gas flow, but with a very compact and modular generator design.

The unique and patented FlatFlow® technology enables a vertical and uniformly distributed gas flow over the entire Carbon Molecular Sieve bed, all within a very confined space.

Modular System

Total flexibility is achieved with the ability to add additional capacity modules at a later date to meet increasing production demands.

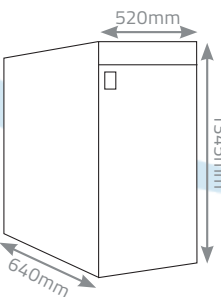
The patented "slave" module is the same design as the main "master" modular generator but without the PLC, controls and power supply.

It can be added to increase the original Oxygen gas capacity by up to three times, to a total of 24 units.



Master

Slaves



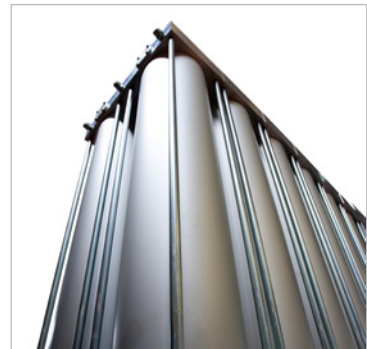
Compact Design

The PO₂ fits through a standard doorway and into the tightest spaces.

It also allows for containerisation.

Aluminium & Stainless Steel

Ensures corrosion-free operation to maintain purity levels, while guaranteeing long-term performance.



Italian Quality

Decades of experience, innovation and design has meant that the PneuTech branded European PO₂ series generators are world-leading in efficiency, reliability and longevity.

With the highest air to O₂ conversion and lowest maintenance factor, PO₂ generators provide the best performance.



Certified & Safe

Guaranteed Supply

The PO₂ guarantees a 95% purity supply of Oxygen gas which is supported by an onboard Oxygen analyser system.

The O₂ analyser constantly monitors and controls the purity level of the gas produced, alarming and isolating the supply if the purity drops below preset levels. This ensures that the critical minimum gas purity and flow is maintained at all times with gas quality continuity.

Medox Gas Analysing System

An additional real-time gas analysis monitor is available to be added to further measure the concentration and composition of the Oxygen and residual gases as listed. The monitor will alarm and shutdown the Oxygen output if the residual content or individual gas composition is too high:

- Oxygen O₂
- Carbon Monoxide CO
- Carbon Dioxide CO₂
- Moisture H₂O



Certified Oxygen

The design, manufacture, and operation of the PneuTech PO₂ is certified to the following International Safety and Medical Compliance Standards, making for a safe and reliable investment:

- ISO 9001:2008
- ISO 14001:2004
- EMAS
- ISO 13485:2012 (Medical Devices)
- CE 93/42 (Medical Devices)
- PED 97/23/CE



PLC Interface

The PneuTech PO₂ PLC features a large 7 inch touchscreen HMI for user-friendly monitoring and control – both at site and remotely through the Web network. Equipped with Profinet EtherNet interface and optional Modbus RT4 or Profibus DP, the PO₂ is made easy to work with from your PC or control monitoring screen.

Gas purity, flow, and pressure can all be closely monitored with up to 450 days of data logging for operational history, all through your PC or central HMI system.



Large Benefits

Safety

With no bottle or bulk requirements, the gas is no longer stored at dangerously high pressure in heavy bottles, or in (-1950°C) liquid form requiring specialised on-site filling. Delivering gas at a similar low pressure (6–7 bar) to your Oxygen delivery system, eliminates the need for hazardous storage.



Guaranteed Purity

The PO₂ generator will provide guaranteed purity that can be seen by the real-time monitoring and 400 day process history through the data logger. Unlike fluctuating gas purities found with high pressure cylinders, the PneuTech generator will only deliver to a consistent purity and will shut off the supply if this is not achieved.



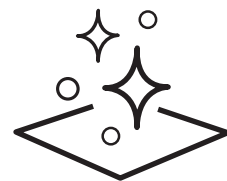
Guaranteed Supply

The onsite generator system will ensure a continuous Oxygen gas supply 24 hours a day, 7 days a week, 365 days a year. It is not subject to a contracted supply line and, as long as the electricity is on, you will receive O₂ gas!



Sterile

The PneuTech PO₂ generator only employs non-corrosive materials in its manufacture such as aluminium and stainless steel, thus maintaining hygiene and longevity while the Oxygen gas passes through stringent sterilisation filtration before being released for use.



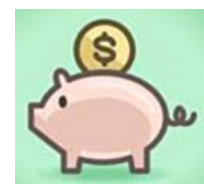
Flexible

The PneuTech PO₂ modular generation system is unique in that it enables additional gas capacity to be added at a later point to meet increasing Oxygen demands, simply by adding further generation modules.



Economy

Generating your own onsite supply of Oxygen is the lowest cost form of gas in the industry, at approximately only \$0.80/m³ and less than 10% the cost of bottled gas.

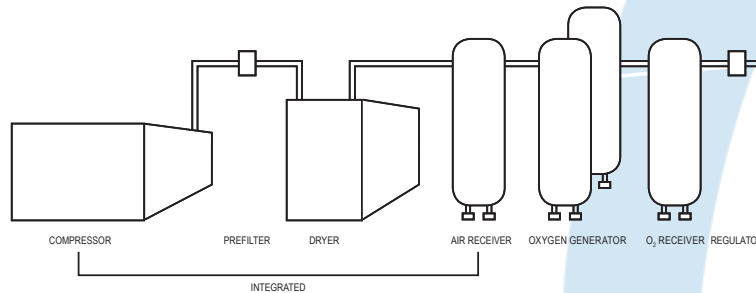


Plant Layout

Plant Process

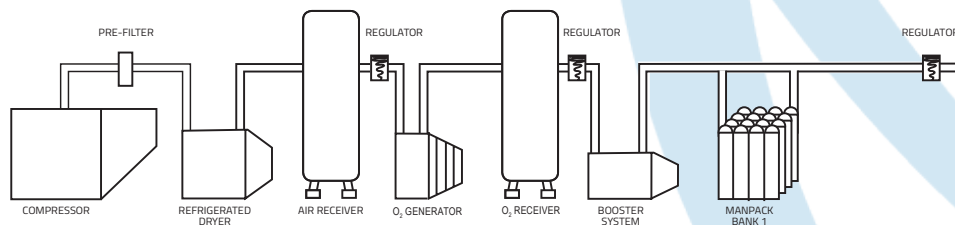
The PneuTech PSA Oxygen generators rely on an incoming supply of clean, dry compressed air which needs to first enter a refrigerated or desiccant dryer process. It then passes a coalescing and activated carbon filter bank, en route to the generator. The Oxygen gas is then discharged and filtered through a final dust collection filter before entering a receiver for storage. The outgoing Oxygen gas can be supplied as low pressure (6–8 bar), medium pressure (20–30 bar) or high pressure (200–300 bar) to suit your particular application.

Low Pressure O₂ Generator Setup

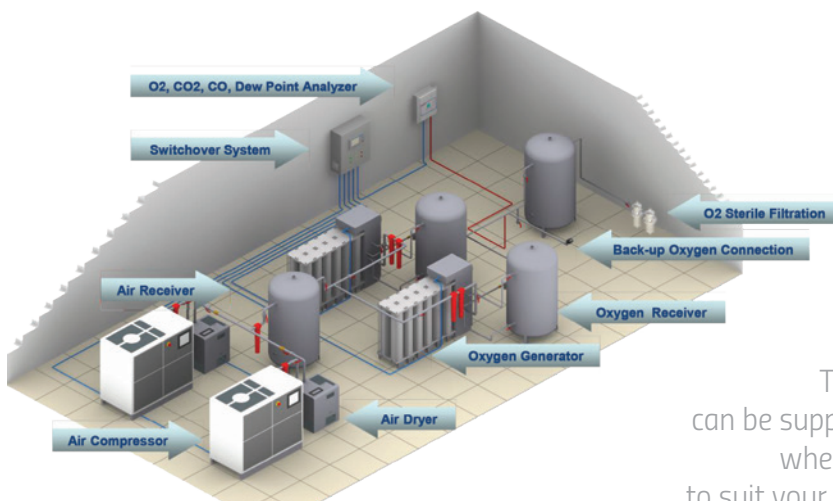


95% pure Oxygen gas is supplied at 6 bar pressure. It is recommended that some Oxygen gas cylinders are also kept onsite as an emergency backup supply.

High Pressure O₂ Generator System With Storage



95% pure Oxygen gas is supplied at up to 300 bar pressure for storage into onboard Oxygen gas cylinders. This enables reserve gas to be held onsite as a backup supply if and when required.



Larger Customised Oxygen Generation Setup

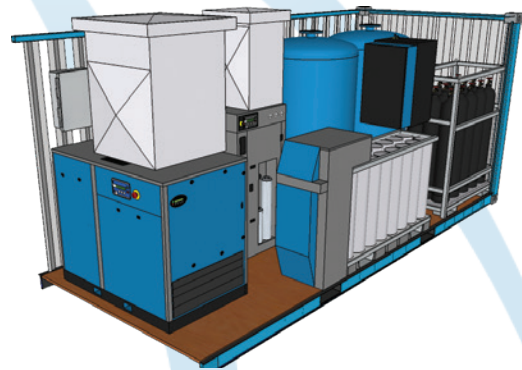
The PneuTech PO₂ generation system can be supplied and installed onto a factory site where space is available and customised to suit your particular Oxygen gas requirements.

Containerised

PO₂ Series

The PneuTech PO₂ Oxygen generation plants can be supplied in ready-to-go 10' and 20' 'Oxypak' containerised packages.

These turnkey systems provide 'plug-n-play' solutions which can be trucked directly to your site, only requiring a single electricity and Oxygen gas connection.



Safe & Secure

Complete with internal electrical distribution and provision for remote monitoring and operation,

the PneuTech containerised packages provide guaranteed safety and security in this tamper-proof and fully lockable enclosure.

Portability

The Oxypak can be easily transported and relocated around sites to suit changing requirements.

As a 'relocatable' generation plant, it does not require building consents and can be positioned on any suitable level and firm ground for immediate use.



Serviceability

The Oxypak can be easily accessed and serviced by our registered and trained technicians without disruption to your medical processes and environment.

Peace Of Mind Supply

The Oxypak provides a worry-free and guaranteed 'peace-of-mind' Oxygen gas supply to your medical facility 24/7/365. Just 'set and forget'!



Oxypak 10'



Oxypak 20'

Specifications

Model	Output		Power (kW)	Storage		Pressure (Recyclable)	Container Type
	L/min	Patients		Yes	No		
OXY-8LP	43.30	8	8		✓	6	10'
OXY-16LP	88.30	16	12		✓	6	10'
OXY-24LP	131.60	24	16		✓	6	10'
OXY-32LP	173.30	32	16		✓	6	10'
OXY-40LP	218.30	40	23		✓	6	20'
OXY-48LP	258.30	46	23		✓	6	20'

- Ambient temperature: 5–45°C
- Power requirements: 230V/50Hz, 400V/50Hz
- HP (high pressure) setups available

Standard Oxypak Package includes:

- Air compressor
- Refrigerated dryer
- Air filters
- Oil/water separator
- Oxygen generator
- Oxygen analyser
- Oxygen flow meter
- Sterile filters
- Electrical distribution board
- Air & Oxygen receiver tanks
- Oxygen booster receiver tank (HP models only)
- Oxygen booster/compressor (HP models only)
- PLC with touchscreen HMI
- Container enclosure with cool/hot air ducting



Pneu-Assure

2 year warranty on all major components*

- ✓ Parts & labour warranty for 2 years (excludes regular maintenance)
- ✓ 2 year warranty on major components including:
 - ✓ PLC
 - ✓ PSA Cylinders
- ✓ Guaranteed full support from your certified distributor
- ✓ Global technical experience leading to a well-rounded point of view on machines and industry standards

Why PneuTech?

Personal Service
Technical Support
Customer Satisfaction
Reliable
Receptive & Adaptable
Ethical
Industry Experienced
Global

You are the number one priority when you partner with PneuTech. Your goals are our goals because your success is our success. Your experience is superior when partnering with PneuTech because of quality products and personal service. You want efficiency, reliability and versatility with the supply of air compressors and all associated equipment – so that's what we strive for.



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Other PneuTech Products...



PDR Refrigerated Dryer

The PDR series non-cycling dryers provide high quality of compressed air and deliver lower dewpoints at a relatively low initial cost. These dryers are compact in footprint and extremely reliable, requiring little maintenance. They come standard with a programmable controller, a digital dewpoint indicator, and an aluminium heat exchanger.



RSCR 30-500 Compressors

The RSCR series fixed speed rotary screw air compressors are an exceptionally durable line of higher horsepower air compressors. Routine maintenance is simplified because of this unit's unique direct coupled design and easily removable panels (when applicable). The sound enclosure reduces noise pollution while the high efficiency electric motor brings the highest efficiencies.



RSCRPM Compressors

The RSCRPM series has an energy efficient permanent magnet motor that gives you unlimited motor starts per hour, consistent discharge pressure, soft motor starts, 25% turndown, and hugely reduced power consumption! This unit also comes standard with a touchscreen controller, a low RPM and oversized air end design, an oversized air/oil cooler, spin-on filtration, and much more!



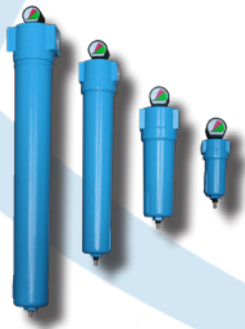
RSCRD-V Oil Free Compressors

The RSCRD-V series oil-free air compressor produces high quality Class 0 compressed air, for food and beverage industry requirements. Incorporating a 100% "dry" two-stage compression process, this series guarantees human safe compressed air while providing the full benefits of a VSD drive screw compressor.



WOS Oil/Water Separators

The WOS 40-1250 cfm series condensate oil water separators have been developed for excellent separation of lubricant and oils from condensate generated from rotary screw, rotary vane, and other types of compressor equipment. These units allow for EPA friendly disposal of your condensation.



PF Inline Filtration

PF inline filtration comes standard with a differential pressure gauge and are protected with an interior and exterior powder coating finish. They hold a replaceable filter that can be quickly and inexpensively maintained. All housings come standard with internal float style drain valves.



PN Nitrogen Generators

The PneuTech Modular Nitrogen Generation system is a cost-saving alternative to buying bottled nitrogen from another company. A relatively low initial investment combined with very low operating costs results in savings up to 60%! Its unique modular design makes for a very compact system, while extra modules can be added at a later date as requirement increases.

Providing
high efficiency
Delivering
exceptional value
of ownership

Mission Statement:

Using our combined industry experience, we provide knowledge, support, and superior products to compressed air distributors across the globe. We are committed to producing positive results through being trustworthy, ethical, and accessible. We are founded in the beliefs that through working together we can continue to transform the industry, while rising to turn challenges into opportunities.



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