



THE ONSITE  
GAS COMPANY  
inmatec.com



## PO OXYGEN GENERATORS

Oxygen generation right onsite:  
safe, efficient and sustainable



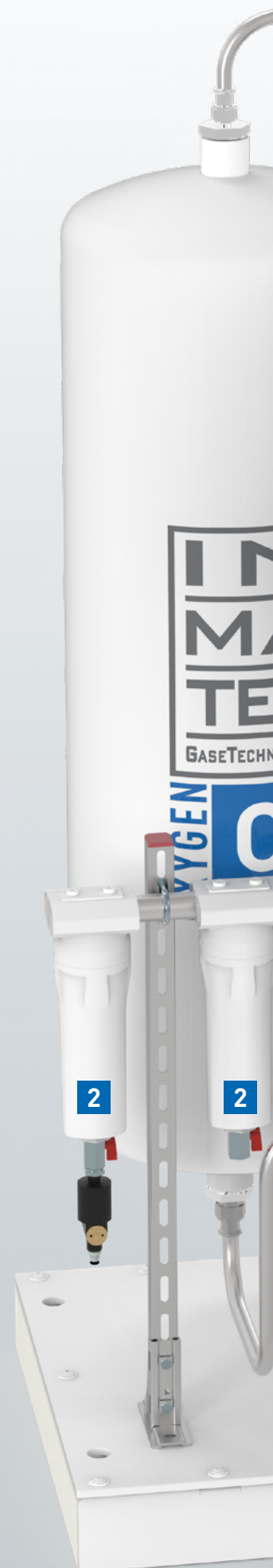
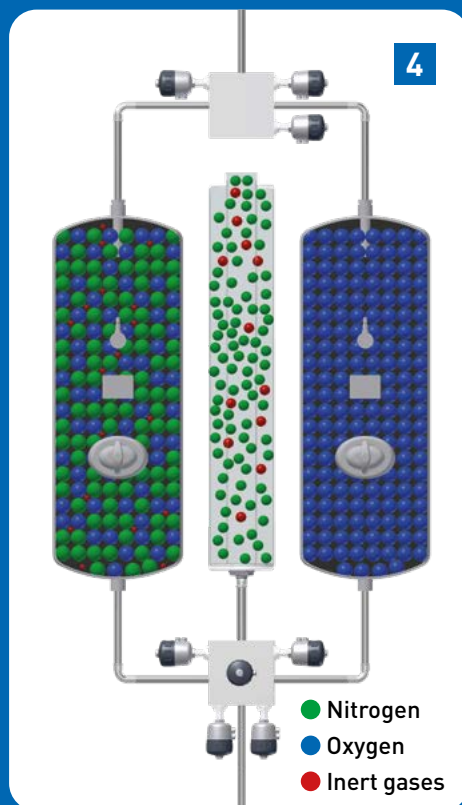
# Saving money, remaining independent

Generating oxygen independently instead of buying it – those who decide to produce it themselves not only save money but also remain independent of liquid gas manufacturers. After all, liquid oxygen is expensive. High transport and storage costs as well as long-term supply contracts create additional expenses. With highly efficient onsite oxygen generation, you will not only be independent but you will also produce exactly the purity your application requires – with complete transparency onsite. Many systems will pay off after just a few years. An investment that will be quickly noticeable in your budget.

## PSA Technology

The mode of action is based on the adsorption principle. For oxygen generation, compressed air alternately flows through two receivers filled with ZMS. The nitrogen molecules of the ambient air, which is supplied under pressure, is absorbed on the surface of the ZMS. The free oxygen molecules pass through the ZMS without being obstructed and are directed into a separate downstream product receiver. This is where the oxygen is stored for subsequent use.

After the ZMS in the first receiver have been saturated with nitrogen molecules, the process is switched to the second receiver. While the ZMS in the first receiver regenerate under pressure relief and by being flushed, the nitrogen molecules are absorbed under pressure in the second receiver. This generates a continuous flow of oxygen.





PO 150 OXYGEN GENERATOR

### 1 OXYGEN ANALYSIS (ZIRCONIUM OXIDE SENSOR)

The zirconium oxide sensor installed as standard is durable and particularly reliable. Temperature-resistance and quick response times guarantee continuous and reliable monitoring of purity.

### 2 MICRO, ACTIVATED CARBON AND DUST FILTERS

Two inlet and one outlet filters ensure a high degree of compressed air quality, maximum protection of the molecular sieve used as well as a high level of oxygen quality for the consumer. This is how the system stands out with a particularly long service life.

### 3 BASE FRAME AND RECEIVER

All receivers have been designed for  $\geq 2$  million load cycles in accordance with PED (Pressure Equipment Directive) and feature fatigue strength. From series PO 220, high-quality sieve bottoms ensure a flow-optimised design. The integrated sinter filters prevent particle transfer from the ZMS in use, increase service life and ensure the best possible product quality.

### 4 HIGH-QUALITY ZEOLITE MOLECULAR SIEVE

The zeolite molecular sieve (ZMS) made of biodegradable material is not just environmentally friendly, it is also characterised by a long service life and low air factors, thanks to exceptional adsorption properties. Sustainable, powerful and efficient.

### 5 VALVE BLOCK AND HIGH-QUALITY PNEUMATIC VALVES

The valve block's compact design minimises leakage risks and allows easy accessibility for maintenance. The efficient arrangement of the high-quality pneumatic valves results in quick response times and precise control. Reliable and maintenance-friendly.

### 6 SENSOR & CONTROL TECHNOLOGY

A pressure sensor and a flow control located at the outlet of the generator ensure efficient operation and continuous monitoring of the oxygen quality.

The perfect interaction between sensor and control technology is not just energy efficient and optimised for consumption but it also guarantees maximum operational safety and excellent product quality.

### 7 INLET AND OUTLET PRESSURE REGULATORS

The inlet and outlet pressure regulators guarantee a constant flow of the incoming or outgoing gas, which increases process stability.

### 8 9" TOUCHSCREEN CONTROL

The high-quality control offers maximum user friendliness. The entire process is presented visually and clearly. Numerous interfaces allow transparent process monitoring as well as easy integration into the customer's existing infrastructure.



# Cost savings in a bundle



## AUTOPURE TECHNOLOGY

During start-up or a minor decrease in product purity, the receiver is flushed with oxygen until the required purity class has been reached. Only then will the generator open the oxygen outlet and make the oxygen available at the required purity. The product gas of lower quality is extracted via the rinsing valve until the required purity has been reached. This ensures a constantly high and consistent product quality and is therefore particularly suitable for sensitive applications in the pharma and medical industry.

**Our quality promise at an attractive price.**

**Package option 1** combines AutoPure Technology with a pressure sensor to monitor the generator's intake pressure and a flow sensor at the generator's outlet to continuously monitor the flow quantity.

**Your benefits:** Consistently high purity, a long service life and maximum operational safety at a great price.



## BASE LOAD SWITCH

The base load switch function controls two redundant supply systems. One system is in charge of the master function, while the second system manages the slave function. Switching between the two systems is automatic and is controlled by pressure and flow.

**Your benefits:** Thanks to the additional redundancy, supply is guaranteed at all times. In the event of necessary surplus production, capacities can be flexibly adapted to the additional requirement and optimised. Furthermore, uniform utilisation increases generator service life. In addition, required servicing and maintenance do not necessarily result in downtimes because a back-up system is available.

Increased efficiency, reliability and stability of the production process – you can have it all in one option with base load switch control.

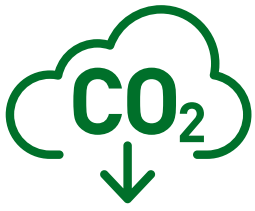


## REDUNDANT VALVE BLOCK

If needed, the availability or reliability of the system can be increased by using a redundant valve block in the generator's inlet and outlet. Activation of the ball valves switches to the second (redundant) pipework during generator operation. In most cases, a fault involves the process valves. The valve block therefore covers redundancy in about nine out of ten cases. The switch takes place manually. Process valves can be cleaned or replaced without system downtimes. This results in easy, maintenance-friendly and cost-effective redundancy compared with two parallel systems.



PO 1000 OXYGEN GENERATOR



# Investing in a clean future

Sustainable production has great influence on the competitiveness of a company. Sustainable management within the sense of Corporate Social Responsibility (CSR) requires investments for the economic use of natural resources and the protection of both climate and environment.

The investment in environmentally friendly technologies initially requires money but it will pay off. By reducing carbon dioxide (CO<sub>2</sub>) emissions as part of production and transport, you will make a contribution to climate protection.

In addition, companies benefit economically from significant savings in energy costs, reduced energy taxes and government subsidies. In this way, investments in Inmatec O<sub>2</sub> generation systems usually pay off very quickly.

## Your partner in oxygen supply

Inmatec has been developing and producing nitrogen and oxygen generators since the company's foundation in 1993. We supply tailor-made solutions to the whole world and are now one of the international market leaders. With our PSA systems, membrane systems and H<sub>2</sub>KAT subsequent cleaning to generate the highest purity classes, we meet the most demanding requirements. The high-pressure solutions and container design guarantee efficiency, quality and independence. With our many years of experience and global presence, Inmatec's "Made in Germany" seal represents absolute peak performance.

Situated in Herrsching, our company has been part of the BOGE Group since 2023 and can, in addition to our own team, make use of its international sales and service organisation. This means we are able to work for you even more effectively and purposefully. Discover the fascinating world of onsite technologies.

### ALL BENEFITS AT A GLANCE



**Experience since 1993 – with more than 9,000 systems installed all over the world**

**Development and manufacture "Made in Germany"**

**Reliable and adjustable technology**

**High degrees of efficiency and quality**



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