

NITROBERG® | OXYBERG®

Oxygen & Nitrogen Generator Systems – Engineered in Germany

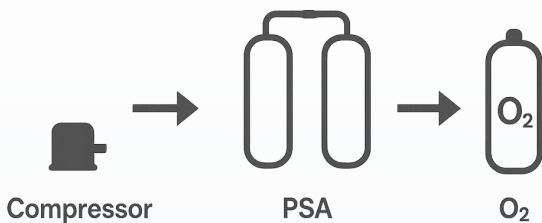


PSA OXYGEN GENERATOR – OXYBERG®

Reliable On-Site Oxygen Supply

PROCESS

The OXYBERG® Pressure Swing Adsorption (PSA) technology efficiently separates nitrogen molecules from compressed air, delivering a steady stream of high-purity oxygen.



Ambient Conditions and Apply Standard

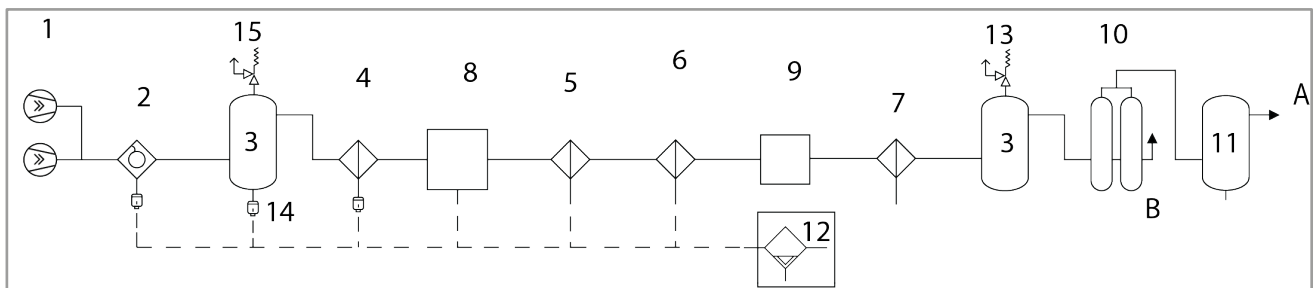
- Temperature range: +5°C to +40°C
- Electrical connection: 110-230 V/60-50 Hz
- Noise level: from 55 to max. 78 dB(A)
- Accordance with DIN ISO 13485:2003 & in accordance with European Directive 2014/68/EU

Compressed Air Specification

Temperature range: +5 to +40°C
 Air quality: ISO 8573.1, Class 1.4.1
 Operating pressure: 10 bar

ADVANTAGES:

- Customized solutions tailored to specific needs
- Compact, space-efficient system design
- Automatic operation for ease of use
- Mobile Oxygen supply for flexible deployment
- Digital surveillance for enhanced monitoring
- Ideal for locations without infrastructure
- Reduced operating costs for long-term savings
- High availability ensuring uninterrupted supply
- Return on Investment in less than 36 months
- Optional CO₂/CO and O₂ measurement modules

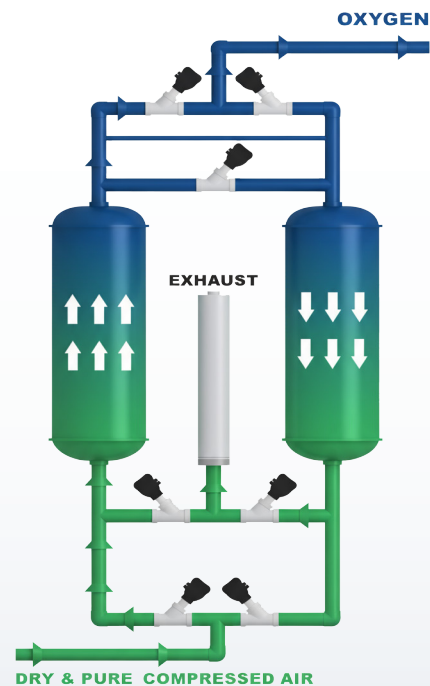


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|-----------------------------------|--|-------------------------------------|
| 1. Screw Compressors - Multistage | 7. Dust filter | 11. Compressed Oxygen tanks |
| 2. Water Separator | 8. DRYBERG® - Refrigeration/Adsorption Dryer | 12. OWAMAT® - Oil / Water Separator |
| 3. Compressed air tanks | 9. Activated Carbon Tower | 13. Safety valves |
| 4. Pre filter | 10. OXYBERG® - PSA Oxygen Generator | 14. BEKOMAT® |
| 5. Fine filter | | A. Oxygen |
| 6. Super fine filter | | B. Nitrogen-enriched air outlet |

PSA OXYGEN GENERATOR – OXYBERG®

PRODUCTION PRINCIPLE

The OXYBERG® Oxygen Generator operates with two twin vessels filled with high-quality molecular sieve (zeolite). When compressed air enters a vessel, Nitrogen is adsorbed by the zeolite, while Oxygen flows directly into the buffer tank. Once the first vessel reaches Nitrogen saturation, the process automatically switches to the second vessel, releasing the adsorbed Nitrogen into the atmosphere. This twin-column PSA system offers all the advantages of a fully integrated in-house oxygen production solution.



Product Specification

Description: Twin-column, heavy-duty oxygen generator for continuous 24/7 operation under full load in healthcare environments.

Column vessels: Built per Pressure Equipment Directive, powder-coated, and approved by the European Supervisory Board for long-term reliability.

Adsorbent material: High-quality zeolite molecular sieve with top energy efficiency and minimal pressure drop.

Process valves: Durable stainless steel pneumatic valves, Made in Germany, ensuring long service life.

Piping: Stainless steel press-fitted piping for leak-free and durable performance.

Instrumentation & Measurement: Includes Zirconium O₂ analyzer, HMI outlet pressure display, full-pressure indicators, and ready-to-connect wiring.

Control & Monitoring

- Multifunctional color touch control panel with 4" or 7" HMI, Siemens-made
- Automatic Start/Stop with dedicated buttons
- Real-time display of purity, outlet pressure, operating hours, and all sensor values
- Display in metric or imperial units
- Trend Display: visualize all measurements over 24 hours
- Alarm Management: full audit trail, acknowledgment, deletion with timestamp, permanent history
- Purity Adjustment: change oxygen purity at the push of a button
- Access Management: three hierarchy levels for secure control
- Service Reminders: automatic notifications for periodic maintenance
- Long-Term Data Storage for process analysis
- Automatic Restart option after power outages