

OXYSWING® OS-16

PSA Modular Oxygen Generator

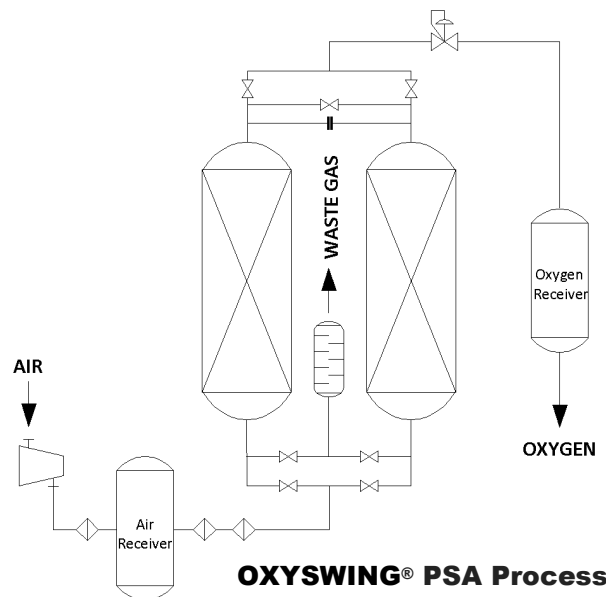


Key features

- Adsorber Module(s) in Anodised Aluminium
- Set of External Feed Air Filters
- Pneumatic Valves
- Internal Piping in Stainless Steel 316
- Maintenance-free Exhaust Silencers
- Air Flow Regulation
- Local Instrumentation
- Control System with Siemens SIMATIC® colour 7" Touch Screen
- Operator Interface and Data logging
- Standard Profinet Industrial Ethernet Interface
- Oxygen Pressure Transmitter for Optimal Monitoring and Automated Idle-Mode

The Oxygen Production Process

The OXYSWING® generators extract the available oxygen in the ambient air from the other gases by applying the Pressure Swing Adsorption (PSA) technology. During the PSA process, compressed and cleaned ambient air is led to a molecular sieve bed, which allows the oxygen to pass through as a product gas, but adsorbs other gases. The sieve releases the adsorbed gases to the atmosphere, when the outlet valve is closed and the bed pressure returns to ambient pressure. Subsequently the bed will be purged with oxygen before fresh compressed air will enter for a new production cycle. In order to guarantee a constant product flow, the OXYSWING® oxygen generators use modules of two molecular sieve beds, which alternatively switch between the adsorption and the regeneration phase. Under normal operating conditions and with correct maintenance the molecular sieve beds will have an almost indefinite lifetime.



Advantages

- **Safety:**
Low Operating Pressures, no Hazardous Storage
- **Economy:**
Low Operating Costs, Easily Expandable
- **Convenience:**
Fully Automatic and Unattended Operation
- **Reliability:**
Easy to Install and Maintain

Applications

- Aquaculture
- Feed Gas for Ozone Generators
- Glass Blowing
- Leaching of Gold & Silver Ores
- NO_x Reduction for Fuel Burners
- Oxygen Lancing
- Welding, Brazing
- Wellness

Healthcare

The modular OXYSWING® PSA oxygen generators are certified as Class IIB medical devices to MDD 93/42/CE. It is however recommended to consult NOXERIOR before purchasing a generator for any healthcare application.

Performance of OXYSWING® PSA Nitrogen Generator OS-16

Oxygen Content		90 vol.%	93 vol.%	95 vol.%
Feed Air Pressure	bar(g)	7.5	7.5	7.5
	psig	110	110	110
Product Flow rate ⁽¹⁾	m ³ /h	5.6	5.4	5.3
	scfm	3.5	3.4	3.3
Product Pressure	bar(g)	6	6	6
	psig	87	87	87
Feed Air Consumption ⁽¹⁾	m ³ /h	60	59.7	59.2
	scfm	37.9	37.7	37.4
Min. Air / O ₂ Receiver ⁽²⁾	litre	450	400	400
	gallon	119	106	106
Product Dew Point ⁽³⁾	°C / °F	≤ -60 / -76		
Sound Level L _{eq}	dB(A)	<77		

(1) Definition of m³ refers to atmospheric conditions 20 °C, 1013 mbar and dry basis.

Indicated flow rates are valid for operation of the generator at atmospheric conditions 20 °C / 68 °F, 1013 mbar / 14.7 psi and 60% RH.

(2) Smaller receiver volumes might result in lower product pressures. Please contact manufacturer for details.

(3) Dew point at atmospheric pressure

Feed Air Requirements

Supply Pressure	7.5 bar(g)
	110 psig
Supply Temperature	5 / 45 °C
	41 / 113 °F

Min. Air Quality ⁽⁴⁾ Class 0.4.0 to ISO 8573.1

(4) Feed air quality at air filter outlet. Improper feed air quality may cause damage to the nitrogen generator not covered under warranty

Power Requirements

Power Supply	110–230 V / 50–60 Hz
Power Consumption	max. 0.3 kW

Conformity & Certifications

93/42/CE	(Medical Device Directive – Class IIB)
2014/68 EU	(PED – Cat. 1, Mod. H)
2014/30/CE	(Electromagnetic Compatibility)
2006/42/CE	(Machinery Directive)
2014/35/CE	(Low Voltage Directive)

Connections

Feed Air Inlet	G 1"
Oxygen Send	G 1"
Oxygen Return/Outlet ⁽⁵⁾	G 1"
Oxygen Off-Spec ⁽⁵⁾	G ½"

(5) Only in case of on-board installation of an oxygen analyser and/or a product flow meter.

Dimensions & Weight

L	W	H	Weight	
556	1095	1750	mm	489 kg
22	43.5	69	in.	1078 lb

Installation Requirements

Well ventilated and weather protected environment with ambient temperatures between +5 °C / +41 °F and +45 °C / +113 °F. Classified areas excluded.

Product protected by international patents

Nr. EP2047897A1, EP2047897B1, EP2052769A1, EP2052769B1

Peripheral Equipment & Options

- Up to three (3) Dual Bank Unit(s) with Cycle Time Shifting
- Feed Air Unit
- Supporting Frame for Air Filters
- Oxygen Analyser (already included with MDD version)
- Electronic Product Flow Meter
- Feed Air / Product Moisture Analyser
- Feed Air / Product Temperature Transmitters
- Oxygen Sterile/Bacterial Filters
- Telemetry for Remote Monitoring
- Oxygen Booster & Cylinder filling System
- MedOx External Medical Oxygen Gas Analysing System
- Central Supervision System for ISO 7396-1 Installation