KSTK

KSTK

Zhejiang KSTK Manufacturing Technology Co.,Ltd.

Web: www.kstkmanufacturing.com

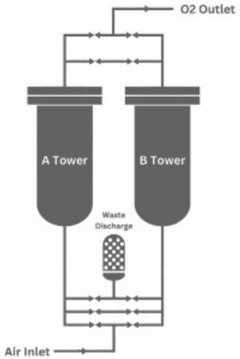
E-mail: contact@kstkmanufacturing.com

Phone: +86 153 7202 6555

OXYGEN SERIES

Pressure Swing Adsorption Technology

Pressure Swing Adsorption (PSA) is a gas separation technology. Its principle is based on the difference in the adsorption properties of different gas molecules by an adsorbent (such as zeolite molecular sieve), which allows the separation of gas mixtures. This technology uses air as the raw material and employs highly efficient, highly selective adsorbents to selectively adsorb nitrogen from the air, thereby achieving nitrogen-oxygen separation.



BENEFITS

Sustainability
- Air as raw material, unlimited supply for a sustainable production

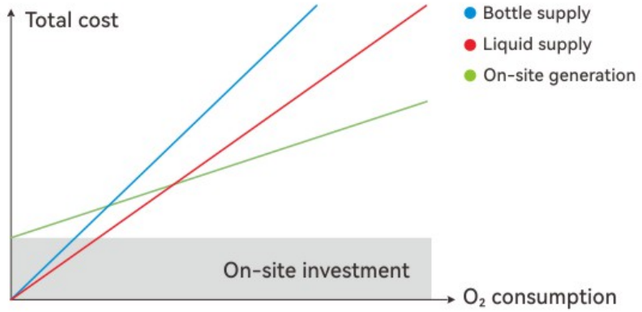
Reliability
- Proven technology, dependable safety
- Fast production, highly efficient
- 24/7 automatic operation

Convenience
- Plug & play design
- Easy operation
- Adjustable output
- Hassle-free maintenance

Economical
- Low operating costs
- Long-lasting equipment
- Short payback period
- Outstanding economic benefits

Gas Generator vs. Traditional Gas Supply

- No rental fee
- No transportation fee
- No storage fee
- No need to wait
- Eliminates safety hazards in handling pressurized cylinders or liquid oxygen





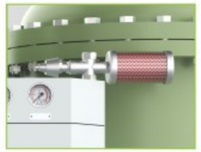

APPLICATIONS

Applications	Oxygen Purity
Combustion Support	35~90%
Oxidation	70~90%
Ozone Purification	90~95%
Aquaculture	90~95%
Medical Oxygen	90~95%
Metal Cutting	95~99.5%

Note: Above data is for reference only

Intelligent Alarm System

- Combines sound and flashing warnings to promptly alert of equipment abnormalities, ensuring operational safety.



Automatic Venting System

- Automatically vents unqualified oxygen and, once purity is met, automatically opens the oxygen outlet valve, providing pure oxygen with no user intervention required.

Reliable Valves

- Made from premium 304 stainless steel
- Resistant to high pressure and corrosion
- Ensuring 2,000,000 cycles of stable operation

Energy-Saving Modes

- Two distinct standby modes allow the system to automatically enter standby when gas consumption ceases, optimizing energy efficiency and reducing operational costs.

High-Efficiency Oxygen Output

- Oxygen to air ratio is 5-15% better than our competitors
- Delivering efficient oxygen production

High-Quality Molecular Sieves

- Customize ordered molecular sieves with excellent adsorption performance, ensuring high oxygen output.

Multi-Function PLC

- User-friendly interface
- Standard 485 and Ethernet connectivity
- Multi-status/language display
- Remote start/stop control

Modular Valve Manifold Design

- Patent modular valve manifold design for high efficiency and stability, reducing leakage risk, and minimizing maintenance time.

Unit Model Definition

Example: KOB-10SA

KSTK K | OB Gas Models | – | 10 Flow Rates | S Unit Structure | A Purity

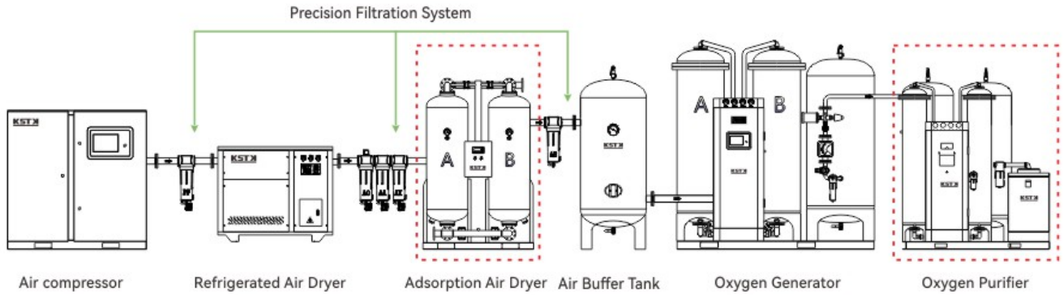
Gas Models
OB-Oxygen Generator
OC-Oxygen Purifier

Flow Rates

Unit Structure
S-Standard Units (Multi-Bed Design)
M-Modular Units

Purity
A: 93±2%
A+: 99~99.5%
X: User specified purity

Standard Installation Flowchart



Note: The red dashed box indicates optional equipment

High Quality Oxygen Generator

Sustainable Oxygen, Green Manufacturing

Our oxygen generators use high-quality zeolite molecular sieves as adsorbents to efficiently separate compressed air and consistently produce high-purity oxygen. Compared to traditional oxygen cylinders or liquid oxygen tanks, our generators offer a more cost-effective solution through self-produced oxygen. This continuous gas supply not only eliminates the procurement, operation, and usage challenges associated with high-pressure oxygen cylinders and cryogenic tanks but also provides a stable, permanent source of oxygen. Designed by our technical team, our products feature a compact structure, require minimal space, and can be easily set up by simply connecting to a compressed air source and power supply. All devices can be customized to meet customer needs and support various energy-saving modes, offering flexible solutions for diverse gas requirements.

Combined Oxygen Generator

One skid solves it all!

Our combined oxygen generator integrates a refrigerated air dryer, a precision filtration system, an air buffer tank, an oxygen buffer tank, and a dual-tower oxygen generator into a single skid-mounted unit. Users simply need to connect the air inlet to an air compressor and the oxygen outlet to the oxygen application. This design greatly optimizes the user experience by eliminating the need for installation and commissioning, saving both space and time, while providing a more efficient and convenient gas supply solution.

Technical Specification

Oxygen Purity	93±2%
Oxygen Flowrate	1~600Nm³/hr
Oxygen Dew Point	-60~-40℃
Oxygen Pressure	1~5Bar
Air Inlet Pressure	6 ~ 8Bar
Air Inlet Temperature	20~35℃
Voltage/Frequency	220V/50~60Hz

Note: Specific requirements can be made upon request

Product Specification

KOB-SA **Purity: 93±2%**

Model	Air to O_2 Ratio (Nm³/hr)		Inlet & Outlet Size (DN)		Air Dryer Model	Unit Structure
	Air Consumption	O_2 Output	Inlet	Outlet		
KOB-5SA	50	5	15	15	KRD-026F	Combined
KOB-8SA	80	8	20	15	KRD-026F	Combined
KOB-10SA	100	10	20	15	KRD-026F	Combined
KOB-12SA	120	12	20	15	KRD-039F	Combined
KOB-18SA	180	18	25	15	KRD-070F	Combined
KOB-20SA	200	20	25	15	KRD-070F	Combined
KOB-25SA	250	25	32	15	KRD-070F	Combined
KOB-32SA	320	32	32	15	KRD-085F	Combined
KOB-60SA	600	60	50	20	KRD-170F	Standard
KOB-100SA	1000	100	65	20	KRD-250F	Standard
KOB-200SA	2000	200	80	40	KRD-420F	Standard
KOB-300SA	3000	300	100	50	KRD-650F	Standard

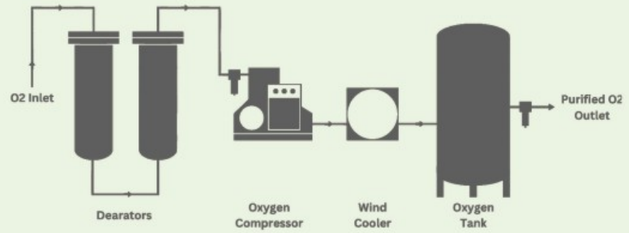
Note: Customized Unit Acceptable
Technical specifications subject to change without notice

Oxygen Purifier

Oxygen Purification Principle

Standard oxygen generators use the pressure swing adsorption (PSA) principle to produce oxygen with up to 95% purity. To achieve higher purity, a second stage of oxygen purification is essential. Our oxygen purifier consists of two adsorption vessels filled with special adsorbents, which further remove non-oxygen gases (such as 4% ammonia, 1% nitrogen, etc.) from the oxygen stream, achieving up to 99~99.5% purity.

Process Flow Diagram



Product Specification

KOC-SA+ **Purity: 99~99.5%**

Model	Standard O_2 to Purified O_2 Ratio (Nm³/hr)	
	O_2 Consumption Rate	Purified O_2 Output
KOC-10SA+	14	10
KOC-20SA+	28	20
KOC-30SA+	42	30
KOC-40SA+	56	40
KOC-50SA+	70	50

Note: Technical specifications subject to change without notice

Technical Specification

Purified Oxygen Purity	99~99.5%
Purified Oxygen Flow Rate	1~50Nm³/hr
Purified Oxygen Dew Point	-60~-40℃
Purified Oxygen Pressure	1 ~ 3Bar
Standard Oxygen Pressure	4Bar
Inlet Temperature	20~35℃
Voltage/Frequency	220V/50~60Hz

Note: Specific requirements can be made upon request

Modular Gas Generator

Distinctive Features

Ultimate Flexibility

Our modular design allows for the addition of multiple aluminum module sets, enabling flexible and convenient adjustments to meet specific gas production needs (up to 7 sets per unit).

Multi Bank Integration

For customers with higher oxygen demands, our modular equipment supports parallel operation without the need for additional standalone units. The multi-bank design allows up to three units to be controlled seamlessly by a single PLC (One Master Unit), offering enhanced scalability and efficiency.

Technical Specification

Oxygen Purity	93±2%
Oxygen Flowrate	1~32Nm³/hr
Oxygen Dew Point	-60~-40℃
Oxygen Pressure	1~5Bar
Air Inlet Pressure	6~8Bar
Air Inlet Temperature	20~35℃
Voltage/Frequency	220V/50~60Hz

Note: Specific requirements can be made upon request

Modular Oxygen Generator

New Gas Supply Solution, Fresh Gas Use Experience!

Unlike traditional multi-tower oxygen generators, the new modular oxygen generator features high-quality aluminum extrusion profile components, offering a more compact design and superior performance. Its innovative system architecture significantly simplifies the equipment structure, reducing both footprint and installation costs. The flexible design allows the unit to be easily placed anywhere in the production facility, providing you with an efficient and hassle-free oxygen generation experience.

Combined Modular Oxygen Generator

One unit solves it all!

Our combined modular oxygen generator cleverly integrates the refrigerated dryer, precision filtration system, air buffer tank, oxygen buffer tank, and modular oxygen generator into a single unit, fulfilling multiple functions with just one device. Users only need to connect the air inlet to the air compressor and the oxygen outlet to the gas application for immediate oxygen supply, no complex installation or commissioning required. The compact, all-in-one design saves space, boosts efficiency, and provides you with an efficient, convenient gas supply solution!

KOB-MA

Purity: 93±2%

Model	Air to O_2 Ratio (Nm^3/hr)		Inlet & Outlet Size (DN)		Air Dryer Model	Oxygen Buffer Tank Size (L)	Unit Structure	Unit Dimension (mm)
	Air Consumption	O_2 Output	Inlet	Outlet				
KOB-3MA	30	3	15	15	KRD-015F	30	Combined	750*1300*1788
KOB-5MA	50	5	15	15	KRD-026F	50	Combined	750*1480*1788
KOB-8MA	80	8	20	15	KRD-026F	100	Combined	750*1800*1788
KOB-10MA	100	10	20	15	KRD-026F	100	Combined	750*1800*1788
KOB-15MA	150	15	25	15	KRD-039F	200	Standard	750*1480*1788
KOB-20MA	200	20	25	15	KRD-070F	200	Standard	750*1480*1788
KOB-25MA	250	25	32	15	KRD-070F	300	Standard	750*1750*1788
KOB-32MA	320	32	32	15	KRD-085F	300	Standard	750*1900*1788

Note: Customized Unit Acceptable
Technical specifications subject to change without notice