



MEDICAL OXYGEN GENERATOR

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TAKE A DEEP BREATH OF
HIGH QUALITY O₂





WHO WE ARE

ZOY Technology focus on medical oxygen generator system research, production and service.

With more than 20 years experience on air compressor research and service at construction site;

ZOY Started from 2015, more than 4 years self-development to release the 1st generation oxygen generator compact version. Now with the experience, technology and skill of medical oxygen generators over 1500 sets installed oxygen generator systems all over the world.



WHERE WE ARE



ZOY Technology has three production center process all models' production. The research and office center located in Changsha, Compact oxygen generator workshop distribute at same building, 1km far settled one more psa oxygen generator system workshop. And in Xianning, self-building production center process oxygen generator from raw material to the finished products, including gas tank manufacturer, finish process, assemble and testing procedures.

WHAT WE DO

Research and Design, Manufacture, Commissioning, Service of oxygen system, Focus on provide reliable, stable oxygen system with less purchasing cost, less maintenance cost and less labor cost.

CERTIFICATE & QUALIFICATION



BUSINESS LICENSE



HIGH-TECH ENTERPRISE



MEDICAL EQUIPMENT PRODUCTION LICENSE



CLASS II INNOVATIVE MEDICAL DEVICES



MEDICAL EQUIPMENT BUSINESS LICENSE



REGISTRATION CERTIFICATE OF SCIENTIFIC AND TECHNOLOGICAL ACHIEVEMENTS OF HUNAN PROVINCE



ISO9001



ISO13485



ISO14001



MEDICAL EQUIPMENT REGISTRATION CERTIFICATE



CE



PRODUCTION LICENSE OF SPECIAL EQUIPMENT GC2 (PIPING INSTALLATION)

2015



© Zoy Medical set up at Changsha

2018



- © The first set high purity oxygen generator of 99.5%
- © Medical Equipment production and business license approved

2021



- © National project of providing Oxygen generator for "Tibet Railway"
- © Honor of "Top Ten Oxygen Generator Brand" in China
- © Reached a strategic partnership with Fusheng Air Group

2016



- © The first-generation oxygen generator independently developed & run successfully
- © Air compressor production license approved

2020



- © Public welfare company of against the Covid-19 epidemic
- © Donated compact oxygen generator system worth more than 8 million
- © One of the first key companies for the prevention & control of Covid-19 epidemic
- © National Emergency Management Department Equipment Supplier

2022



- © Developed 1m3/hr compact oxygen generator successfully won the "Class II Innovative Medical Device"

2017



- © Developed Nitrogen reuse system
- © Compact oxygen generator system run successfully

2023



- © Developed full performance container type oxygen generating system
- © Won specialized and sophisticated enterprise of Hunan

MILE
STONE

OXYGEN GENERATOR SYSTEM

- Compact oxygen generator system
- “ZYPro”series Oxygen generator system
- Modular oxygen generator system
- Container package oxygen generator system
- Zoy-T Control system

PRODUCT
CATALOG

COMPACT

OXYGEN GENERATOR SYSTEM

Zoy compact oxygen generator system has two vessels filled with Zoelite molecular sieve, The molecular sieve adsorbs Nitrogen at high pressure and release it at low pressure when compressed air flows into the vessel. Using the surrounding air as raw material, after Nitrogen adsorbed from compressed air, balance gas is mainly composed of Oxygen, it work as product oxygen flow into the next process.

ZOY compact series is whole package turnkey solution, it contains all the necessary components required for oxygen generator system.

The system has sufficient preprocessing of compressed air, offering extremely clean and dry air (pressure dew point less than -56.2°C) to the oxygen absorber vessels, which greatly ensures the performance and service lifetime of the oxygen generator. The control system developed by Zoy engineering team makes operation very easy, no experts required. Give power to the system, one touch on the screen to start the system then oxygen supplies freely when needed.

All in one design



Core components

- Anest lwata oil-free air compressor
- 4-stage air filters
- 2-stage PSA process
- Self-development integrated valve kits
- Siemens PLC
- ZOY-T online control system

Advantages

- Energy-savingSafe
- Highly integrated, small footprint
- Plug and play, free installation
- One touch start, easy operation
- Online monitoring, unattended management
- 24*7hours supplying, reliable



Specification parameter

Item	ZY-01	ZY-02
Oxygen flowrate	1nm3/hr 17lpm	2nm3/hr 33lpm
Oxygen outlet purity	90~96%	90~96%
Oxygen outlet pressure	0.2~0.5MPa adjustable	0.2~0.5MPa adjustable
System power	2.3kW	4kW
Measurement	1065*750*1830mm	1470*850*1800mm
Noise level	60dB	65dB
Weight	436kgs	630kgs
Control system	Siemens PLC	Siemens PLC
Touch panel	7inch	10inch
Input voltage	AC220V/ 110V 1Phase	AC380V 3Phase
Air compressor	Oil-free scroll type	Oil-free scroll type
Material	Aluminum Alloy& stainless steel	Aluminum Alloy& stainless steel



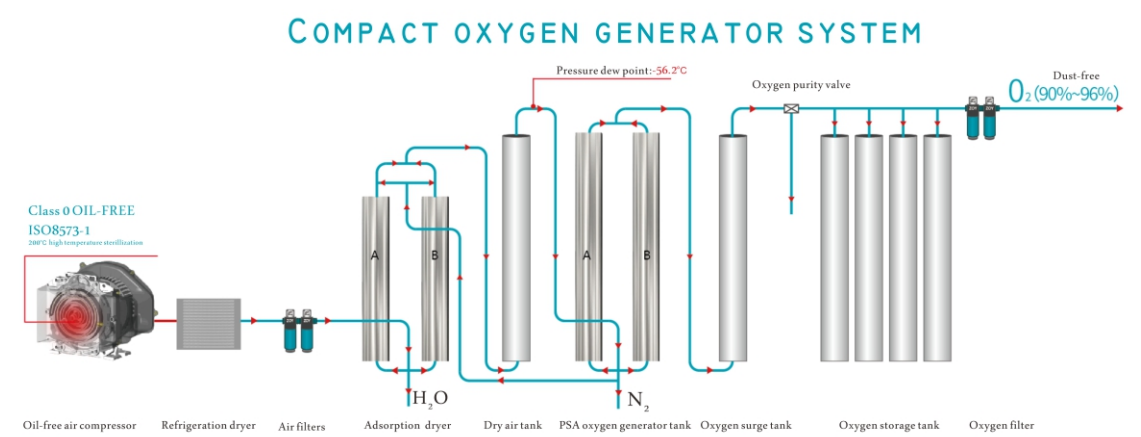
COMPACT

OXYGEN GENERATOR SYSTEM

Working flow process

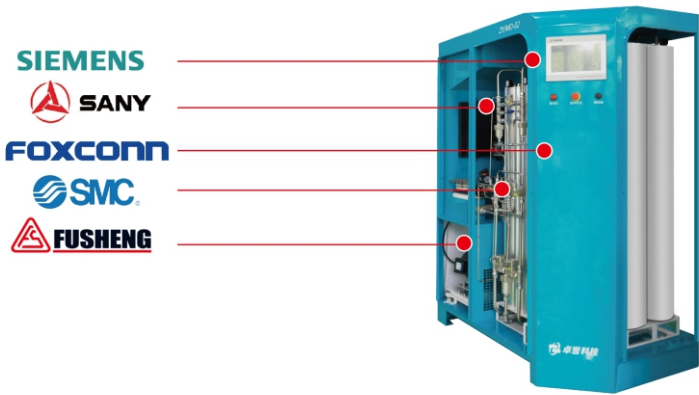
Zoy compact oxygen generator system extracts surrounding air as raw material, oil-free scroll air compressor from Anest Iwata / Fusheng air group not only offering compress process, also sterilize feed air with 200°C high temperature. Following refrigeration dryer cool down the compressed air and remove the liquid water from it. AA and AO two stage Air filters remove particle of 1μm and 0.01μm successively. Balance water removed from clean compressed air in the adsorption dryer by its 13x and activated alumina.

Clean and dry compressed air flows into oxygen generator, as zoelite molecular sieve absorb nitrogen at high pressure and release it at low pressure, oxygen separate from the air and flow into the storage vessels, after ACS filter absorbing oil mist and odor, AX filter removing the 0.001 μm particles from the oxygen. The clean oxygen produced.



Core components

Strong supply chain system not only ensures stable and reliable quality but also the quick-response after-sales service support.



Fighters against Covid-19 pandemic

During the first breakout of Covid-19 spreading, our team worked overtime day & night prepared a batch of oxygen generators which worth about 8million, and arranged delivery to the severely affected areas also the hospitals out of oxygen resource located in rural areas which are located in Henan, Hubei, Hunan province. And following installation, commissioning work finished at soonest with our technicians' to- door service.

As a medical gas manufacturer, we never considering this pandemic as our opportunity, but our responsibility. To provide qualified oxygen to the needed people becomes our top priority.



“ZYPRO” SERIES

OXYGEN GENERATOR SYSTEM

ZOY PSA Oxygen Generator System flowrate from 5m³/h to 120m³/h (33lpm-2000lpm). Its design could flexibly meet various needs of various applications. Equipped with Zoy-T control system and ZOY patent design”Nitrogen reuse system”. N² reuse system use the N² re-work in adsorption dryer. This design greatly saves energy consumption of the whole system as it save the consumption of the compressed air. Compare to other system, This system is 20% less installation power required. The high performance of basic parts adsorption dryer also have excellent water-adsorption efficiency. Compressed air pressure dew point reaches -56.2°C~-61°C.

This also greatly ensures the long service life of the O² generator system.

Model	Oxygen capacity		Dimensions cm	Installation power		Oxygen purity	Oxygen pressure	
	nm³/hr	lpm		kW	HP		Mpa	Psi
ZY/MO-5	5	83	275*105*181	7.5	10	90~96%	0.5	72
ZY/MO-10	10	166	310*130*226	16.5	22	90~96%	0.5	72
ZY/MO-15	15	250	326*145*262	20	26.8	90~96%	0.5	72
ZY/MO-20	20	333	355*145*262	24	32	90~96%	0.5	72
ZY/MO-25	25	416	380*185*253	32	42.8	90~96%	0.5	72
ZY/MO-30	30	500	400*165*295	39	52	90~96%	0.5	72
ZY/MO-35	35	583	420*185*280	39	52	90~96%	0.5	72
ZY/MO-40	40	666	420*185*300	47.5	63.6	90~96%	0.5	72
ZY/MO-45	45	750	478*225*280	47.5	63.6	90~96%	0.5	72

Advantages and Features

- **Smart and Easy Operation**
With Zoy-T control system, all data visible, easy automatic operation & maintenance.
- **Low Operation Cost**
Surrounding air as the only raw material. Energy saving, Each 1m produced only consumes about 1kWh electricity.
- **Environment Friendly**
The exhaust gas has undergone multiple filtration treatments.
- **Quiet Operation**
With high performance noise eliminator, 65dB noise level, free worrying of noise pollution.
- **Safe and Clean Oxygen**
Equipped with 6-stage air filters to remove dust particles, water mist, oil mist and bacterial, ensures safe and clean oxygen.



Application



Medical / Healthcare



aquaculture



sewage treatment



industry purpose

Hospital Reference



Changsha Economic Develop. Hospital



Mongolia Manzhouli Port Hospital



Shanghai Jiaotong University
Punan Hospital



Changsha Huangxing Town Health Center



Changsha Kaihui Town Health Center



Changsha Central Hospital

MODULAR

OXYGEN GENERATOR SYSTEM

Excellent performance

ZOY modular oxygen generator supply high quality oxygen with compressed feed air, it produces oxygen from 83lpm to 1333lpm.

Its highly integrated design works with small footprint, low noise small power consumption.



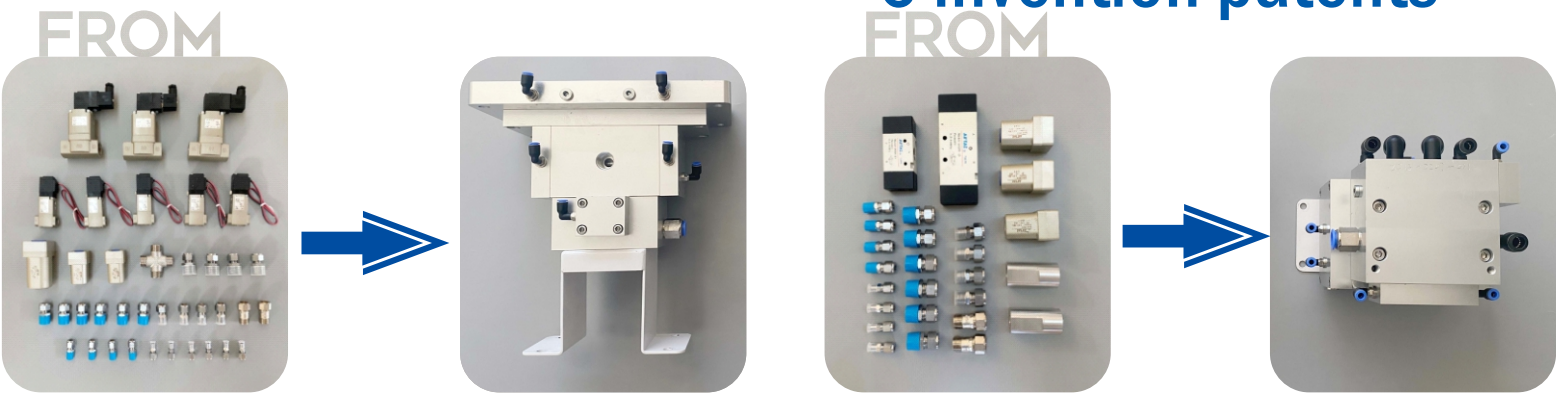
Advantages

- Small footprint, high oxygen capacity
- Highly components integration, less valves and pipe, higher stability
- Modular design, more flexible combination
- 50% reduce on size, less delivery cost, smaller installation site
- Multi-tower design, strong shock resistance and lower noise
- Easy operation, easy installation, smaller installation site
- Energy saving

Oxygen specification

Oxygen purity:	90-96%
Compressed air pressure dew point:	-56.2℃~-61℃
CO content:	<5ppm
So ₂ content:	<1ppm
CO ₂ content:	<300ppm
NO content:	<2ppm
Air filtration grade:	0.001 μm
Oxygen water content:	<67ppm

Oxygen generator with 6 invention patents



Core components

- 10inch colored touch screen
- 6-stage air filters
- 2-stage PSA process
- Self-development integrated valve kits
- Siemens PLC
- ZOY-T online control system
- O₂ analyzer, unqualified O₂ can't enter O₂ tank

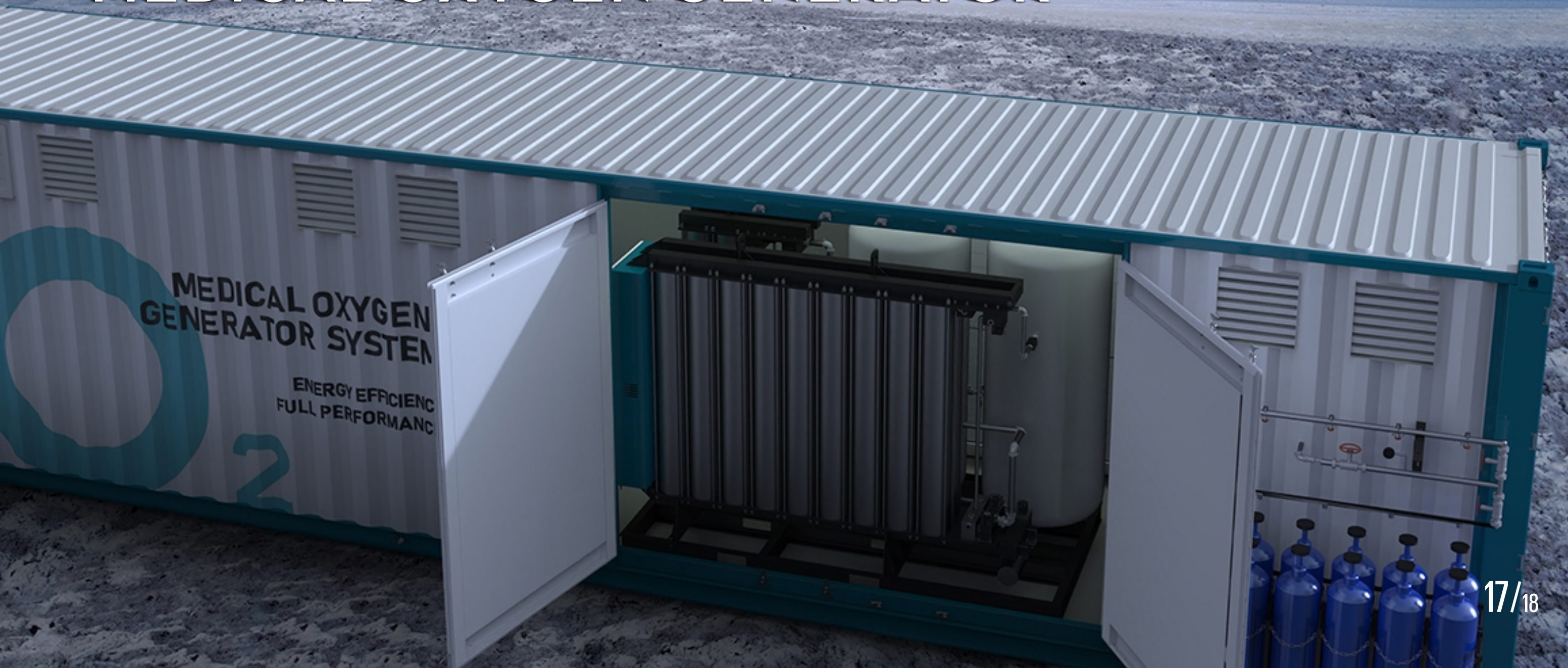
Design condition

Working voltage:	110VAC/220VAC 1phase
Working power:	0.3kW
Ambient temperature:	0℃~45℃, 80~95% RH
Feed air pressure:	7-8Bar
Feed air quality:	ISO: 8573.1:2010 class 4.5.4.
Oxygen outlet pressure:	2-5Bar



FULL PERFORMANCE

MEDICAL OXYGEN GENERATOR



CONTAINER PACKAGE

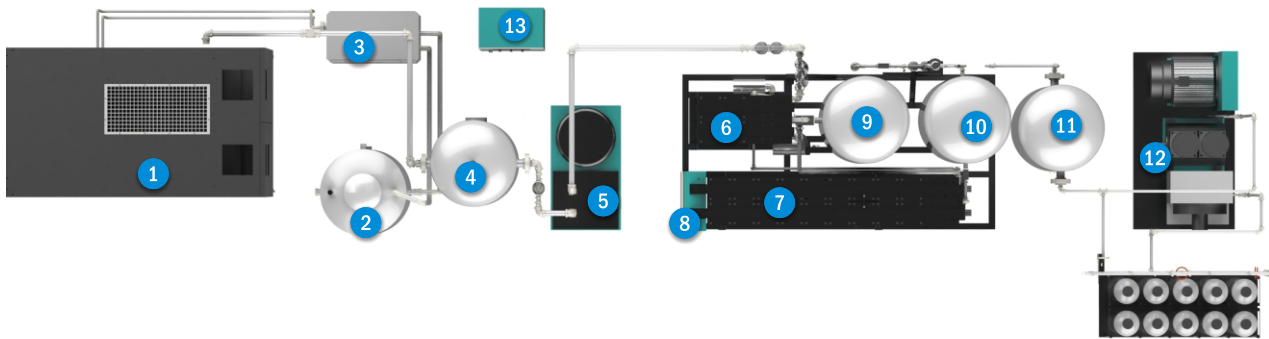
OXYGEN GENERATOR SYSTEM

ZOY container package oxygen generator system is an oxygen generating & filling system installed in an ISO certificated container. Feed air supplied by the screw air compressor, after process then piped into PSA towers to separate Oxygen from the pressurized dry air.

Optional choice with cylinder filling system to collect cylinder oxygen source.

And Heat recovery system to heat water for daily life use. This system realizes the heat recovery and reuse of the air compressor, which greatly avoids energy waste.

ZOY container package oxygen generator system designed to work at all kinds of climates environment, Including alpine and high altitude areas. To satisfy turnkey oxygen solution for different installation site.



- 1 Air compressor
- 2 Hot water tank
- 3 Energy reuse system
- 4 Air receiver
- 5 Refrigeration dryer
- 6 Adsorption dryer tower
- 7 PSA oxygen generator tower
- 8 ZOY-T control system
- 9 Dry air tank
- 10 Oxygen surge tank
- 11 Oxygen storage tank
- 12 Cylinder filling system
- 13 Electric control cabinet

Model	Oxygen capacity		Container type	Installation power		4000Mtrs Sea level Installation power		Oxygen purity	Oxygen pressure		Hot water capacity	
	nm ³ /hr	lpm		kW	HP	kW	HP		Mpa	Psi	Ton	Ton-4000m
ZY/M0-10	10	166	20FT	16.5	22	19.25	25.8	90~96%	0.5	7.2	6	7
ZY/M0-20	20	333	20FT	24	32	38.5	51.6	90~96%	0.5	7.2	8.6	14
ZY/M0-30	30	500	40HQ	39	52	57	76.4	90~96%	0.5	7.2	14	20
ZY/M0-40	40	666	40HQ	47.5	63.6	77	103	90~96%	0.5	7.2	17	27.8
ZY/M0-50	50	833	40HQ	57.5	77	92.6	124	90~96%	0.5	7.2	20.7	33

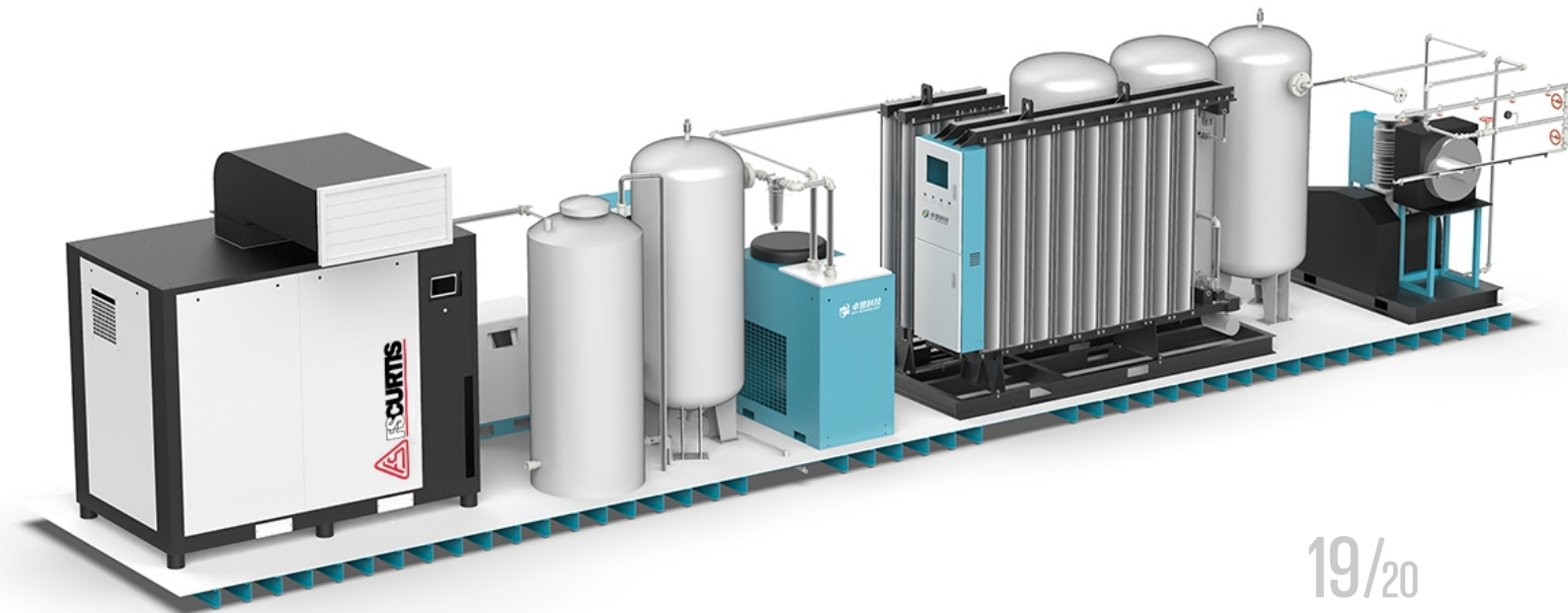


Advantages

- Turnkey solution, plug and play
- Container package, free of machine room construction
- Heat reuse system, energy saving
- Environment eco-friendly
- Online management system, one button stop, start.
- With cylinder filling system, make your own oxygen source
- 24*7hours running, stable and reliable

Design condition

Working voltage:	380VAC/440VAC 3phase
Working sea level:	0~4000meters
Ambient temperature:	0°C~45°C, 80~95% RH
Feed air pressure:	7-8Bar
Air filtration grade:	0.001 μm
Oxygen outlet pressure:	2-5Bar, 150-200bar with booster
Compressed air pressure dew point:	-56.2°C~-61°C



ONLINE MANAGEMENT SYSTEM ZOY-T CONTROL SYSTEM

Zoy engineering team developed hassle-free management control system, everyone could operate it. The system also approved copyrights of computer software. Based on Siemens plc and Sany Rootcloud platform, data collected by each sensor is recorded and analyzed and processed precisely. With Zoy-T control system, operator could read the oxygen generator data anytime anywhere. Online monitoring platform also allows Zoy technical service team obtain running status of each oxygen generator, so as to make professional suggestion of maintenance and routine check accordingly.

Features and Advantages of Zoy-T Control System

- Real-time data display, running log, historical data storage and retrieve
- 10 inch HD color touch screen
- Customer, maintenance and manufacturer three safety level management accounts
- Unqualified oxygen directly discharged, product oxygen quality is greatly guaranteed
- Alarm system with light, sound and buzzer signal indicate the abnormal data
- Reminding on the screen when oxygen generator maintenance schedule is approaching.
- Oxygen flowmeter with digital readout of instantaneous & cumulative flow, its data and oxygen purity synchronous display in touch screen.

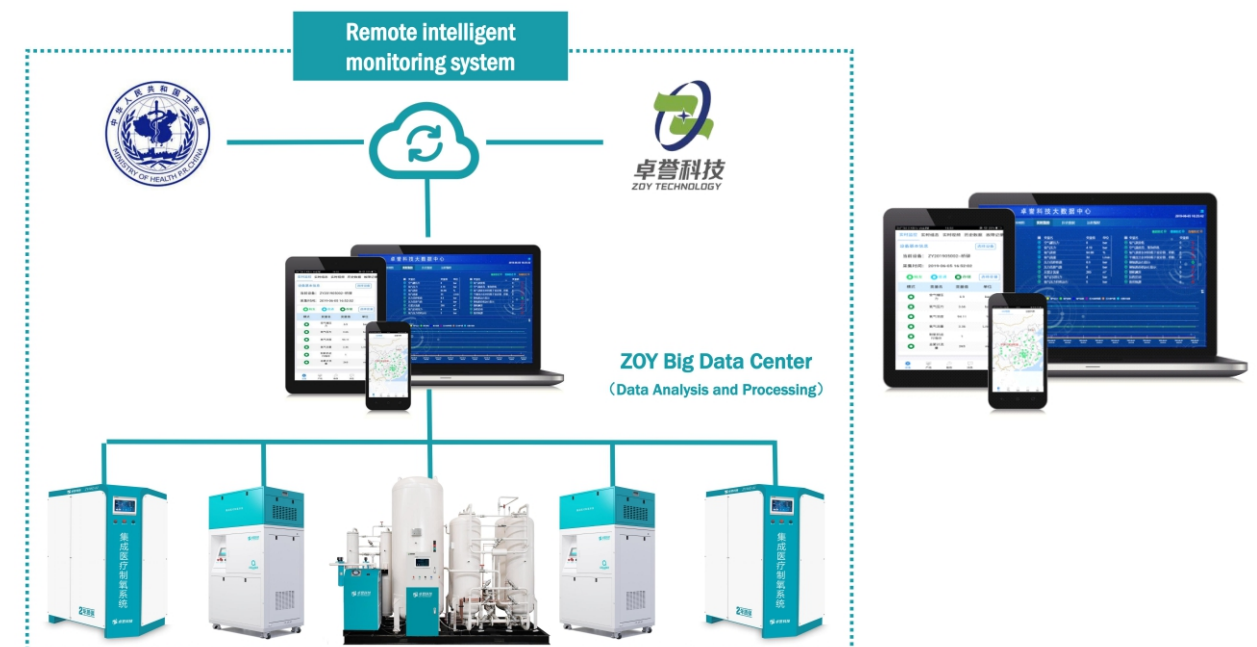


Online monitoring

Online monitoring system running data:
oxygen purity, flow rate, pressure etc.

Remote Management & Maintenance

Real-time online management and maintenance of global terminal equipment, online early warning to ensure oxygen supply.



INSTALLATION SITE



10 Years
40+ countries
1500+ sets oxygen plants
500+ hospitals