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Medical oxygen generator

PSA technology
Best alternative to cylinder oxygen
Safe economic convenient and independent

OXYGEN GENERATOR

OXYLIFE medical oxygen generator system could supply pure oxygen for all kinds of hospitals and clinics continuously.

The system uses air as raw material and zeolite molecular sieve as adsorbent to separate oxygen from air by pressure swing adsorption (PSA) technology. The purity is 93%±3%.

In addition to the existing oxygen generators series, we can also customize the oxygen generator system according to the installation conditions of the customer site, and can be installed on site for customers.

OXYLIFE FEATURES

- **Capacity: 5Nm³/hr to 100 Nm³/hr**
- **Operating temperature: 5℃-45℃**
- **Oxygen outlet pressure: 0.3Mpa(adjustable)**
- **Air feeding pressure: 0.7 -0.8Mpa**
- **Oxygen dew point: ≤60℃**
- **Two pcs molecular sieve beds, ensure uninterrupted operation**
- **Modular design for easy installation**

Higher separation efficiency

OXYLIFE oxygen generators have higher separation efficiency than other PSA oxygen generators of the same type, requiring only a relatively small amount of air to obtain more oxygen.

Easy to Install and Maintain

All parts of the oxygen generator will be commissioned before leaving the factory and sent to the installation site together, making installation very easy. If necessary, we will arrange professional installation personnel to install and guide on site.

Automatic and stable operation

24/7 – 365 days fully automatic operation. Reliable, tested and controlled components ensure smooth performance. Control and checking via monitoring control system automatically, real-time display and monitoring pressure, purity, flow rate, operating condition of each unit and with alarm function.

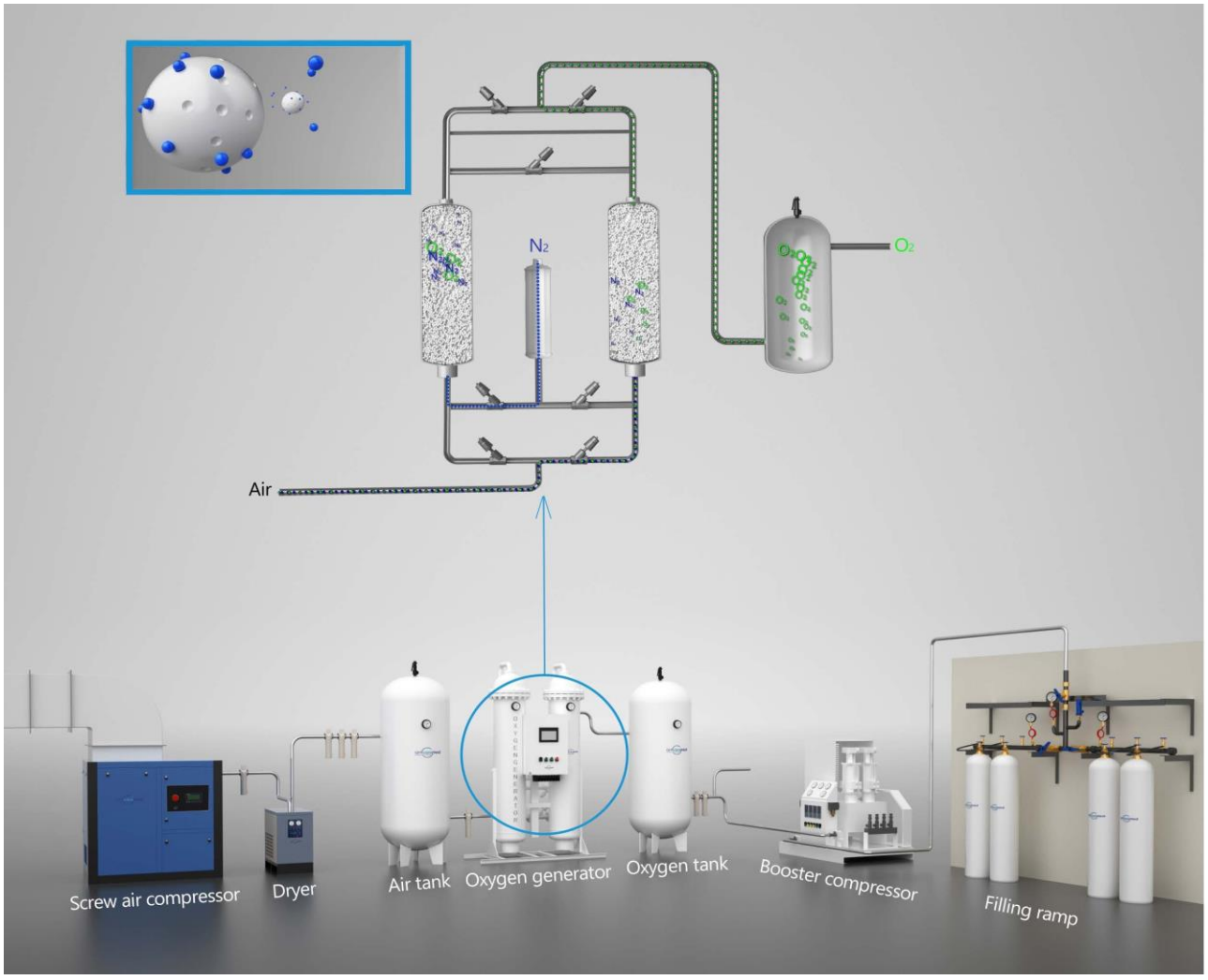
OXYLIFE WORKING PRINCIPLE

Oxygen generator system mainly consists of air compressor, dryer, PSA oxygen generator, and booster compressor. Production process is shown in the figure.

The air is compressed to working pressure by screw air compressor, and then enters dryer through filter to remove oil, water and dust. Finally enter the air tank to store necessary air for PSA generator. Clean compressed air enters PSA generator to separate oxygen and nitrogen.

Adsorption tower filled with zeolite molecular sieves. Molecular sieves adsorb nitrogen and allow oxygen to stream through. Adsorbent releases the impurities (mainly nitrogen) to complete adsorbent regeneration, oxygen accumulates on the top of the absorption tower, then enter to oxygen tank.

After filtering, oxygen can be directly connected to the hospital oxygen pipeline or enter to booster compressor. After pressurization, oxygen is filled into the cylinder through cylinder filling ramp.



OXYGEN STANDARD

European Pharmacopoeia requirements for medical Oxygen			
Oxygen	93 ±3%	Carbon Monoxide	<5 ppm
Carbon Dioxide	<300 ppm	Nitrogen Monoxide and Dioxide	< 2 ppm
Sulphur Dioxide	< 1 ppm	Oil	< 0.1 mg/m³
Water	< 67 ppm	Working dewpoint	- 46℃

OXYLIFE MODEL

Model	Oxygen Capacity		Air Compressor		Booster Compressor		Installation Area	
	Nm³/h	LPM	Feed air required (m³/min)	Power(kw)	Power(kw)	Capacity (m³/h)	Single line solution	Dual line solution
OXY-005	5	83	0.875	7.5	5.5	5	25	45
OXY-008	8	133	1.4	11	5.5	8	28	48
OXY-010	10	167	1.75	15	5.5	10	30	50
OXY-015	15	250	2.625	18.5	5.5	15	30	50
OXY-020	20	333	3.5	22	11	20	40	80
OXY-025	25	417	4.375	30	11	25	40	80
OXY-030	30	500	5.25	37	11	30	45	90
OXY-040	40	666	7	55	15	40	45	90
OXY-050	50	833	8.75	55	15	50	50	95
OXY-060	60	1000	10.5	75	15	60	60	110
OXY-080	80	1333	14	90	22	80	65	115
OXY-100	100	1666	17.5	110	30	100	70	135

Note:The installation area is not an absolute area, we will design according to the specific location.

MAIN PARTS

Air Compressor The air compressor is used to supply compressed air to the oxygen generator. Power: 5.5~630kW. FAD: 0.69~120 m3/min, compact structure, few moving parts, easy maintenance.

Dryer Remove the oil-water mixture, impurities and moisture from air ensuring that air quality is in accordance with relevant international standards for oil residual content. Lower temperature air is better for the efficiency of the molecular sieve.

PSA Oxygen Generator Based on PSA technology, molecular sieve adsorbs nitrogen from the air and separates the oxygen. Using two adsorption tower process, two tower cycle alternately, continuous output of high quality oxygen.

Oxygen Tank It collects the necessary volume of oxygen from PSA oxygen generator, and can stabilize oxygen pressure so that the oxygen is steadily output in a smooth state tank; tank size can be customized.

Booster Compressor Compress oxygen to the required pressure; oil less, low speed and heavy load design, longer life of wearing parts, low noise, low vibration, ensuring performance and safety.

LCD Control Panel Monitor signals from the pressure sensor and provides an alarm system as well as a fail-safe shutdown mode. Key information such as oxygen purity, pressure, dew point and flow are displayed on the control panel.

Filter Filter moisture, oil, rust, dust and other impurities in the air to ensure the quality of the compressed air and meet the requirements of the gas source.

Containerized Oxygen Generator

The container oxygen generator is a complete set of oxygen generators pre-completed in a container. It is a mobile plug-and-play device, with the advantages of low cost, small area, simple operation, easy maintenance, quick on-site oxygen production, convenient switching and no pollution.

The containerized oxygen generator system can be regarded as a mobile oxygen center, which can continuously supply oxygen for different work sites. It can be widely used in medical, petrochemical, ozone production and other industries and fields.

The system works well even in extreme temperatures, high humidity conditions and at high elevations.

Features

- **Direct container loading from factory, easy to transport**
- **Simple installation, automatic operation or manual control according to user needs**
- **Exterior dimensions are mainly for 20' and 40' containers**
- **Best alternative to liquid supply for filled cylinders**

Oxygen Cylinder Filling System

OXYLIFE offers a full range of high-pressure cylinder filling systems allowing to fill daily 10 to 100 medical oxygen cylinders at a pressure of 150 to 200 bar. Designed to be connected to an oxygen generator and mounted on the wall with fixed brackets.The systems provide full autonomy to healthcare facilities: they can easily manage peak consumption flows and fill their own cylinders.

Depending on the use, optional products such as gas heaters, backfire preventers, pressure relief valves, gas leak alarms, pressure alarms, pressure switches, and bottle guard brackets are available to extend the functionality of the gas manifold in practical applications and to meet customer demand for high-performance products.

CONTACT US

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