



# On-Site Medical Oxygen System

0.1 to 200 m<sup>3</sup>/hr



**Purity 93% & above**

**High Quality, Cost Efficiently**



## How it works

Summits **M**edical **O**xxygen Generator system works on the principle of Pressure Swing Adsorption, widely termed as PSA. This conventional gas separation technology is being used to separate Oxygen from Compressed air. The major components are a pair of adsorbent vessels, product tank, Switching valves, intelligent PLC, Oxygen analyzer and instruments. The adsorbent vessels filled with Zeolite preferentially adsorbs nitrogen and CO<sub>2</sub> whereas Oxygen is not adsorbed by Zeolite due to its larger molecular size and passes through the absorber to the product tank. Based on the prefixed time interval the online adsorber switches to regeneration mode and a Adsorbed gas from Zeolite is purged out to the atmosphere. During this operation Oxygen analyzer monitors the oxygen concentration, If oxygen concentration is less than the pre-set value PLC switches the vent valve and purging out the gas till it reaches the required purity level. At the same time hospitals oxygen demand will be met by secondary source of supply (cylinder / LMO) through alternative valve automatically.

## Exclusive Features

- ✓ Medical Oxygen gas purity 93 (±3%)
- ✓ Oxygen Pressure above 5 bar g
- ✓ Fully Automatic system
- ✓ Digital oxygen flow measurement
- ✓ Built-in Auto change over
- ✓ Real time monitoring of process parameters
- ✓ Animated Reminders on scheduled maintenance through HMI
- ✓ Smart Algorithm for consistent purity even under flexible consumption.
- ✓ High Efficiency zeolite with highest packing density.
- ✓ Uniform flow distribution design to maximize zeolite life
- ✓ Medical Grade Oxygen Filter at the outlet
- ✓ Wireless Remote monitoring through android devices.
- ✓ Built-in Data logging feature
- ✓ Multi-level security for supervisory control
- ✓ User Friendly Interface
- ✓ Compliance with European Pharmacopeia, Indian Pharmacopeia & ISO 7396-1
- ✓ 7" HMI, Wireless mounting are optinal.



## Advantages

- ✓ Reduction of oxygen cost
- ✓ Safe low-pressure oxygen usage instead of unsafe risky high-pressure cryogenic cylinders
- ✓ Avoidance administrative operations / Errors
- ✓ Quicker ROI

**Instant  
Pay back**

**A Product of Innovation & Quality**

## Technical Specification

Model	Oxygen Flow (lpm)	Oxygen Flow (m <sup>3</sup> /hr)	Eqv. Cylinder (D**) Per day (Nos)	Eqv. Liquid Oxygen Per day (Lts)
OxyLife2	30	2	7	60
OxyLife3	50	3	10	90
OxyLife5	85	5	17	150
OxyLife8	130	8	27	240
OxyLife8 <sup>+</sup>	150	10	34	300
OxyLife12	200	12	41	360
OxyLife15	250	15	51	450
OxyLife 15 <sup>+</sup>	300	18	62	540
OxyLife21	350	21	72	630
OxyLife 21 <sup>+</sup>	400	24	82	720
OxyLife27	450	27	93	810
OxyLife32	530	32	110	960
OxyLife32 <sup>+</sup>	580	35	120	1050
OxyLife37	610	37	127	1110
OxyLife45	750	45	154	1350
OxyLife56	930	56	192	1680
OxyLife75	1250	75	257	2250

\*Performance @ 30°C Ambient temperature

D\*\* - D type cylinder – capacity 7m<sup>3</sup>

Oxygen Purity : 93% ± 3%  
 Oxygen Pressure : 5 to 5.5 bar g  
 Air Pressure : 7 bar g  
 Air Inlet Temperature : 40 deg C  
 Air Quality : ISO 8573-2010 Class 1-4-1

### Adjustable Purity

All standard models have online oxygen analyzer and purity can be adjusted on field when different purity its required.

### Alarms and Mimic display

An optional Mimic display panel and audiovisual alarm shall be supplied for better monitoring of the system functions.

### Optional features

As per ISO 7396-1:2016 the oxygen supply system should have 3 sources of supply Primary, Secondary and Reserve.

Type 1. 1 PSA System + 2 External Source such as cylinders

Type 2. 2 PSA System + 1 External Source such as cylinders

## Technology



**SUMMITS** has a dedicated team of engineers to design the adsorption vessels based on advanced CFD simulation which eliminates the fluidization of adsorber beds during a complete PSA cycle of the **OXYLIFE** PSA Generators.

**SUMMITS** uses specially produced molecular sieves which are highly resilient during long term application. The excellent auto regeneration property of the sieves lead to many years of high quality oxygen production.



All piping of our oxygen generators are made of selectively chosen medical grade materials. All components and parts in contact with oxygen are subjected to high degree of cleanliness in accordance with **NFPA 99**.

## Regulatory standards and quality compliances

### Standards and Quality Compliances

ISO 9001:2015  
 NFPA 99C(1)  
 ISO 7396-1  
 CE

Summits Vs International Requirements					
Parameters		ISO 7396-1	United States USP XXII Oxygen 93%	European Pharmacopeia Oxygen 93%	Summits
Oxygen	O2	>90%	90% -96%	90% -96%	90% -96%
Carbon Monoxide	CO	< 5ppm	< 0.001%	< 5ppm	< 5ppm
Carbon Dioxide	CO2	<300ppm	<0.03%	<300ppm	<150ppm
Sulfure Dioxide	SO2	-	-	<1ppm	<0.2ppm <sup>(1)</sup>
Nitrogen Oxides	NOX	-	-	<2ppm	<1ppm <sup>(2)</sup>
Water	H2O	<67PPM	-	<67ppm	<3ppm
Oil		<0.1mg/m3	<0.1mg/m3	<0.1mg/m3	<0.003mg/m3

**Summits Provides Customized Solutions**

# Capable of catering Clinics to large hospitals!



## Summits Hygronics Private Limited

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