



SIKHA MEDIEQUIP PVT.LTD
RISING TECHNOLOGY, DESIGN AND IDEAS



**On-site
Medical Oxygen Generator**

Discover the absolute
reliability for your
hospital with onsite

SMECO
RISING TECHNOLOGY, DESIGN AND IDEAS

Hospital Location

Price Hike

Irregularity & Unavailability

Evaporation losses

Transportation

Vendor Dependency

"NEGLIGENCE"

SAFETY

Price Hike

Bottled gases & Liquefied gases are subjected to fluctuating prices.

Evaporation Losses

5-10% of evaporation and non usage oxygen losses are observed.

Irregularity

Supplied gas can be irregular, causes disruptions in oxygen supply.

Negligence

You can run out of medical oxygen using cylinders, if attention is not paid.

Hospital location

If hospital is in a remote location, oxygen delivery can be very costly.

Transportation

Weekly/monthly charges are huge when calculated on annual basis.

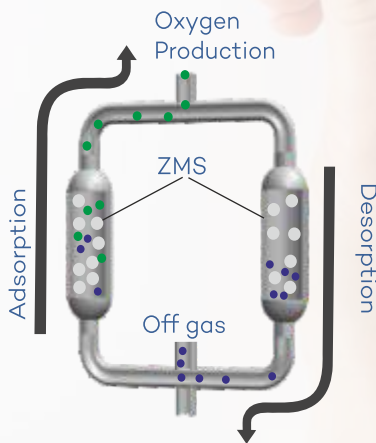
Dependency

Oxygen cylinders are heavy, and often troublesome.

Safety

Oxygen cylinders are at high pressure, proper handling of cylinder is required.

Problems Faced By Hospitals With High Pressure Cylinders And Liquid Oxygen Tanks



PSA (Pressure Swing Adsorption)
Process explaining oxygen production

How is medical oxygen produced with PSA ?

SMECO medical oxygen generator uses only atmospheric air as raw material. Medical oxygen generator consists of two adsorbers filled with zeolite molecular sieves. Pressurized air is passed through one of these adsorbers, zeolite having a structure to attract nitrogen, adsorbs nitrogen from air and oxygen is allowed to pass through to the storage tank and is produced as the final product. As adsorber approaches saturation, air is allowed to pass through the other adsorber while this adsorber is being regenerated to ensure a continuous supply of medical oxygen. This changeover takes place through a specially designed micro controller to ensure a hassle free operation. The quality of oxygen produced is continuously monitored by an oxygen analyzer.

The Oxygen System

Comprises Of The Following



Air Compressor
Pulls air in the system

Refrigeration Dryer
Removes moisture from compressed air

Air Tank
Minimizes pulsation

Multistage Filtration
Removes dust, oil etc.
for non-contamination

Inlet Air Monitoring System
To eradicate molecular sieve contamination

PSA System
Nitrogen is removed and Oxygen is processed

Oxygen Analyzer
Monitors quality of Oxygen

Storage Tank
Stores and supplies medical
oxygen to patient's bed

A High Definition touch screen display

With all inbuilt functions

SMECO Medical Oxygen Generator Complies with all medical standards and regulations



User Friendly touch-screen Interface for easy operation and maintenance

- Alarm management system
- Plug and Play
- Fully automatic
- Process data display
- Service planning element
- Running hours display of consumables
- Data logging via USB drive
- Graphical representation

Additional Upgrades

- Digital flow meter with totaliser
- High pressure oxygen tank
- Cylinder manifold and alarm management system

Model Table

Model	Oxygen Flow Capacity		Total no. of beds		No. of Cylinders / per day	(L X B X H) Feet Smeco
	LPM	NM ³ /hr	Normal Beds	OT, ICU & Labour Beds		
Smeco 2.5	42	2.5	10	3	≤ 9	3.0 x 2.6 x 7.2
Smeco 5.0	83	5	20	5	≤ 18	3.0 x 2.6 x 7.2
Smeco 7.5	125	7.5	30	8	≤ 27	3.6 x 3.3 x 7.2
Smeco 10	167	10	40	10	≤ 36	3.6 x 3.3 x 7.2
Smeco 12.5	217	13	50	10	≤ 45	3.6 x 3.3 x 7.2
Smeco 15	250	15	60	15	≤ 55	4.3 x 3.6 x 7.2
Smeco 20	333	20	80	20	≤ 63	5.2 x 3.9 x 7.2
Smeco 25	417	25	100	25	≤ 88	5.2 x 3.9 x 7.2
Smeco 30	500	30	125	30	≤ 106	5.9 x 4.3 x 7.2
Smeco 40	667	40	165	40	≤ 141	6.5 x 5.9 x 7.2
Smeco 50	833	50	200	50	≤ 176	7.5 x 6.9 x 7.2
Smeco 75	1250	75	300	75	≤ 265	Custom designed
Smeco 100	1667	100	400	100	≤ 353	Custom designed
Smeco 150	2500	150	625	155	≤ 530	Custom designed
Smeco 200	3333	200	825	200	≤ 706	Custom designed

Technical specification

Oxygen Flow :	2.5 to 250 - NM ³ /hr
O ₂ Delivery Pressure :	5.2 barg
Oxygen Dew Point :	-50 °C
Working temperature:	- 5° C to 45°C
Power Supply :	230 VAC, 50/60 Hz
Inlet air pressure :	Min 7.5 barg

Technical data

- Inlet air as per ISO 8573.1:2010 - Class 1.4.1
- Medical grade conforming to US, EU, UK and Indian pharmacopoeia
- Pressure up to 200 kg/cm²g is available on demand through oxygen compressors.
- Relative humidity - Max. 80%

- Sound Level of 65 dB from a distance of 1 meter
- USB Storage is there to store parameters values
- CE certified electrical & electronics with 24 VDC operating Voltage
- All tanks are fabricated per ASME standards
- All tanks have corrosion resistant internal environment
- ISO 9001:2015: Manufacturing is in accordance with certified QMS (Quality Management System).

If your requirement is not covered in our standard models, we can customize the medical oxygen generator as per your hospital setup.

A mark ahead in certified purity

Medical Oxygen Standard	European Pharmacopoeia (Oxygen 93 percent)	US Pharmacopoeia (USP XXII Oxygen 93 percent monograph)	Indian Pharmacopoeia	ISO 10083	ABSSTEM'S SMECO
Oxygen (O ₂) concentration	90-96%	90-96%	More than 90%	<90%	95% (±)1

Oxygen purity

	95% (±)1
CO:	<3 PPM
CO ₂ :	<168 PPM
So ₂ :	0 PPM
NOX:	0 PPM
Oil:	<0.08mg/m ³
Dew point:	(-) 50 Degree celsius

SMECO meets the world standards and compliance per Pharmacopoeia. These standards are required when producing or providing medical grade oxygen. Stringent protocols and engineering makes it possible to comply with these standards.

Product Range

Medical Oxygen Generator

1. Medical Oxygen Generator



- This is a plug and play system.
- Requires dry compressed air and one storage tank only.
- Easy to install and operate.
- Can be moved to any location.

2. Smeco Skid system



- This system comes with air compressor, multistage filtration system and de-greased storage vessel.
- This is a compact and mobile oxygen generator.
- It's a complete package with all instruments required for oxygen generation.

3. Smeco skid with Tank/Cylinders



- Medical oxygen generator with Oxygen Booster compressor for filling of cylinders or big storage tanks.
- Storage tank filled at 30 bar g pressure and Cylinders filled at 150 bar g pressure.
- Cylinders filling range per day is around 8 to 300 Nos. of oxygen cylinders.

Shield support

*"Fast response, Professional support,
World-class service & Trust"*



Annual Maintenance Contracts (AMC)

AMC Options Type of Service offered by Shield

Shield Complete AMC with 24x7 technical-on call support

Shield Premium CMC with 24x7 technical-on call support.
Covers all consumables & breakdown)



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F-193, Sector-3, DSIIDC
Bawana Industrial Area, Delhi - 110039

Tel.: 01143086344

Mobile No. - 9136583434, 9111000661

Email - info@shikhasurgical.com

Website - www.shikhasurgical.com



Smeco Shield gives you the greatest service support. Shield works global and in all service requirement, our specialized Shield service engineer immediately gets in touch with you on phone and for an immediate action in 16-48 hours. Fast Response, Trust worthy, Professional Support, World-class service options is what Absstem Shield is all about.