

## PRODUCT CATALOG

### Hypoxic Gas Generators (HGG-M-50LPM)





## Key Specification Parameters:

### Features

- Membrane based Hypoxic Gas Generators.
- Microprocessor based intelligent controlling for on demand applications.
- Digital Display for Flow and Purity of Oxygen
- Oxygen output varies from 6.33\*% to 21\*\* %
- Safety Audio Alarm at 6.33% oxygen purity.
- Single generator for all application, could be utilized in both research and hypoxia training applications.
- Flow rate: 50 SLPM
- Variable Pressure Output (14 PSI – 110 PSI)
- Inbuilt Oil Free Air compressor
- Single Phase Indian Power Supply operation (Make in India)
- Continuous operation
- Suitable for One user
- Supplied with User Mask
- Wheel Mounted

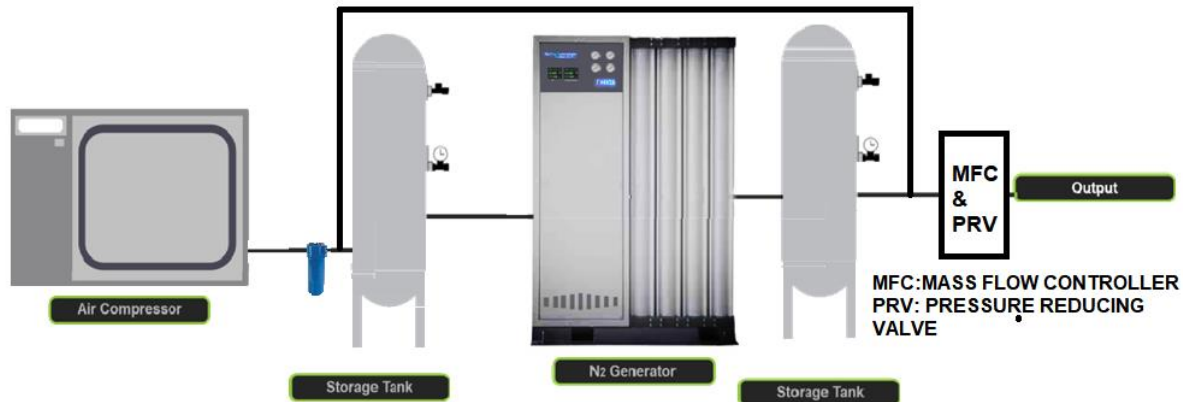
\*6.33% simulates 3000 Feet Altitude.

\*\*Atmospheric Air



## Key Features of Neometrix Make **Hypoxic Gas Generators (HGG-M-50LPM)**

- Made in India
- Most Cost Effective
- Set either in altitude or oxygen in percentage
- Audio Alarm (User Settable), Factory Set for 30000 Feet altitude, 6.33% Oxygen purity
- Highest Level of Reliability & Safety
- Single Phase, Indian Power Supply
- Maximum space saving
- Long Working Lifespan
- Minimum Service requirements
- Noise less than 50 dB, good for Lab environment
- Microprocessor based Intelligent Hypoxicator with User friendly GUI.



**BLOCK LINE DIAGRAM OF Hypoxic Gas Generators (HGG-M-50LPM)**

Above diagram shows working and installation of our Hypoxic Gas generators. We are using most intelligent desiccant dryer to dry the input oil free compressed air and Air filters to purify air before sending to Membrane Type Nitrogen Generation system to generate Nitrogen, which we mix with Compressed air through mass flow controllers and in close loop with Oxygen purity Sensors to generate required Hypoxic Gas.

It will deliver high quality, high grade hypoxic gas, at flow rate & purities that can meet the demands of any industry. Regardless of your application, our Membrane type Nitrogen generator provides an energy efficient, low cost Hypoxic gas supply methods.

We are using pneumatics connector, moisture and particle removing filters from FESTO or SMC, Japan. We are importing Membrane from Parker and other best international companies to provide high quality Hypoxic Gas Generators. We are always maintaining highest quality standards.

Our Hypoxic Gas Generator is suitable for almost all application where hypoxic gas is required.



- Altitude training chambers
- Single use with mask
- Sleeping bags
- Normobaric hypoxia chambers
- Suitable for all animals and humans test purpose
- All Hypobaric applications



## TECHNICAL SPECIFICATIONS FOR Hypoxic Gas Generators (HGG-M-50LPM)

Model No:	<b>HGG-M-50LPM</b>
Technology	Membrane Type
Altitude range	3000 to 40000 feet
Flow rate	Max 50 LPM
Purity	6.33*% to 21** %
Sensors	Oxygen sensors for display Purity
Output Pressure	Variable from 14 to 110 PSI
Air compressor	In built (Oil Free)
Dryer	In built
Electric Supply	230 V +- 10 %, 50/60 Hz
Operating Temperature	5 to 40 C
Noise	Less than 50 dB
Storage Humidity	Less than 95 % RH, non-condensing

\*6.33% simulates 3000 Feet Altitude.

\*\*Atmospheric Air



## Other Related Products

### Hypoxia Chambers:

- Designed to provide controlled environment
- Suitable for animals and humans studies and training
- Space available for treadmills and training cycle.
- User friendly Digital Interface
- Maintain CO<sub>2</sub>, Temp, O<sub>2</sub> and humidity level.
- Chamber is made of a metal with PU-foam insulation.
- CO<sub>2</sub> Scrubber to remove CO<sub>2</sub> from rooms or cabinet



**Hypoxia chamber for animal studies with Hypoxicator**



**Hypoxia chamber for Human studies with Hypoxicator**





## Technical Specification of Hypoxia Chambers

- Oxygen sensor
- Accuracy range 0 to 100 % V/V
- Zirconium based principal
- IR based Co2 Sensors
- CO2 range 0 to 5 % V/V
- Suitable CO2 scrubber
- Humidity range 10 to 99 %
- Humidifier
- Patient monitoring system
- Remote controlling and storing Data

Model No	NE-HC-100LA	NE-HC-100LH
Altitude range	1000 to 40,000 Feet	
Oxygen range	0 to 20 %	
Temperature range	-15 to 50 C	
CO2 Level	400 PPM	
RH	10 to 99 %	
MOC	Stainless Steel	
Gate	Front acrylic transparent	
Insulation	100 mm Puff Insulation	
Dimensions	L x W x H = 2.5 x 2 x 2.5 feet	L x W x H = 2.5 x 2 x 2.5 m



## **OXYGEN ENRICHMENT FACILITIES FOR HIGH ALTITUDE (5000 mtr)**

**Customer: DIPAS (DRDO Lab, New Delhi)**

**DIPAS: Defence Institute of Physiology & Allied Sciences (DIPAS)**

### **130 LPM Oxygen Concentrator (40% Purity)**

Purity of oxygen: **40% ±2 (For Human consumption)**

Flow Rate: 130 LPM at **5000 Meter altitude Ambient**

**Pressure: 0.5 bar G**

Temperature for operation: Subzero (Ambient temperature up to -40C)

Place of Installation: **Leh region (within 200 Km from Leh)**

Continuous working required: 12-14 hrs per day

Feed Air Compressor: Non lubricated

Display: a. Flow Rate of oxygen, b. Purity of oxygen

O2 and CO2 Controller: 01 Set

Approx. Weight (without package): Less than 150 kg (If possible, optimize to 100 kg) Dimension: Within one cubic meter

Power Consumption: Less than 9 kW

Electrical supply required: 230 V/ 50 Hz/ single phase

Safety measures

- MCB for current overload
- Pressure -



Relief Valve for

high pressure

User features

- Low Purity indicator Audio/ Visual indication
- Hour counter                      Display
- Flow display                      Analog/digital display



## **230 LPM Oxygen Concentrator (40% Purity)**

Purity of oxygen: 40%  $\pm$ 2 (For Human consumption)

Flow Rate: 230 LPM at 5000 Meter altitude Ambient

Pressure: 0.5 bar G

Temperature for operation: Subzero (Ambient temperature up to -40C)

Place of Installation: Leh region (within 200 Km from Leh) Continuous working required: 12-14 hrs per day

Feed Air Compressor: Non lubricated

Display: a. Flow Rate of oxygen, b. Purity of oxygen

O2 and CO2 Controller: O2 Set

Approx. Weight (without package): 300 kg (If possible, optimize to 250 kg) Dimension: Within 1600 mm  $\times$  1000 mm  $\times$  1000mm

Power Consumption: Less than 18 kW

Electrical supply required: 220V / 440 V / 50 Hz / 3 phase

Alternative Power Source: Appropriate DG Set

Safety measures

- MCB for current overload
- Pressure

Relief Valve for

high pressure

User features



- Low Purity indicator Audio/ Visual indication
- Hour counter                      Display
- Flow display                      Analog/digital display



## **80 LPM Oxygen Concentrator (93% Purity)**

Purity of oxygen: 93% ± 2% (For Human consumption)

Flow Rate: 80 LPM at 5000 Meter altitude

Ambient Pressure: 0.5bar G

Temperature for operation: Subzero

(Ambient temperature up to -40C) Place

of Installation: Leh region

(within 200 Km)

Continuous working required: 12-14 hrs/day

Feed Air Compressor: Non lubricated

Display: a. Flow Rate of oxygen.

b. Purity of oxygen

O2 and CO2 Controller: O2 Set

Safety measures

- MCB for current overload

- Pressure

Relief Valve for

high pressure

User features

- Low Purity indicator Audio/ Visual indication

- Hour counter Display

- Flow display Analog/digital display



Oxygen Cylinder filling facility:

Oxygen booster with manifold and  
to fill cylinders of 47LWC upto 150 bar

Suitable oil free  
pressure valve

Alternative Power Source: Appropriate DG Set

Approx. Weight (without package): About 600 kg for concentrator and  
booster Approx. Dimension: 2.5 m × 2 m × 1 m (Without Genset)

Power Consumption: About 15 kW

Electrical supply required: 220 V / 440 V / 50 Hz / 3 phase Oxygen  
cylinder to be provided: 47litre water capacity (04 no)



## OEM DECLARATION

Neometrix is OEM

(Original Equipment Manufacturer)

for

PSA Type Medical Oxygen Plants

**(Make in INDIA)**

This is to certify that M/s Neometrix Engineering (P) Limited E-148, Sector-63, NOIDA is ISO 13485 Certified PSA Type Medical oxygen Plant manufacturer based in NOIDA, Uttar Pradesh India.

M/s Neometrix Engineering (P) Limited E-148, Sector-63, NOIDA is OEM and supplies “NEOMETRIX” Make, Make in India PSA Medical Oxygen Generation plants in capacities from 10 LPM to 5000 LPM regularly.

**Specific to PSA Medical Oxygen Generation Plants, M/s Neometrix Engineering Private Limited has following Certifications:**

- 1- Registered at Serial No. 57 of NSIC Certificate for the PSA Oxygen Generation Plants
- 2- NAMO™ Trademark
- 3- **ISO 13485 2016**
- 4- FDA Certificate (UQ-29442)
- 5- GMP Certificate
- 6- ISO 9001 2015
- 7- ISO 14001 2015
- 8- ISO 7396-1:2016
- 9- ISO 60601-1-11:2015
- 10- CE Certificate (CE-9132)



# ††† NEOMETRIX

**DGAQA Certified; An ISO 9001 2015 Company**



All certificate copies are enclosed with this letter.

During COVID crisis M/s Neometrix has supplied more than 100 PSA Medical oxygen Generation Plants to various hospitals all over India.

[https://neometrixgroup.com/products/oxygen\\_products.php](https://neometrixgroup.com/products/oxygen_products.php)

You may visit the following LINK to see one of the installations of Neometrix Engineering (P) Limited, PSA Oxygen Generation Plants at SMS Medical College Jaipur.

<https://neometrixgroup.com/psa-oxygen-generation-plant.mp4>

## **Neometrix Engineering Private Limited**

Office/Factory: E-148, Sector-63, NOIDA, UP-201301 (Delhi NCR, INDIA)

[www.neometrixgroup.com](http://www.neometrixgroup.com), [contact@neometrixgroup.com](mailto:contact@neometrixgroup.com), Phone: 0120-4500800 (100 Lines), Fax: 0120-4500888

GSTN: 09AACCN2254N1Z6, CIN No.: U29120DL2005PTC141114



		<b>राष्ट्रीय लघु उद्योग निगम लिमिटेड</b> <b>THE NATIONAL SMALL INDUSTRIES CORPORATION LIMITED</b> (A Government of India Enterprise)		SN/NO/0000031
Branch Office : III-B/118, Sector-18, Noida-201301(UP) Ph : 0120-4595000-45 Fax : 0120-4556453 Email : bonoida@nsic.co.in Website : www.nsic.co.in				
<b>STORE DETAILS CERTIFICATE</b>				
57	High Pressure Oxygen Generation & Distribution Plants (Stationary & Mobile)	Diesel Generator Option. Mobile (Towing Facility/ Truck Mounted) or Stationary Options available. PSA Based/ Membrane Based/ VPSA Based. Max Pressure: 420 Bar, Maximum Purity: 99.99999%, High Pressure Bottle Filling Application. Distribution Panel complete with Regulators, Valves, Filters, Gas Analysers etc. Part of this system is Air Generation System complete with Air Compressor (14 Bar, 1000 CFM) complete with Air Dryer, Air Filters, piping & Air Storage Vessels. Electric Motor Driven Option as well as Diesel Generator Option. Mobile (Towing Facility/ Truck Mounted) or Stationary Options available. ASTM G93 Compliance System.	Max Pressure: 420 Bar, Maximum Purity: 99.99999%, Dew Point: -50 Degree C.	5
58	Oxygen Boosting, Storage, Charging & Distribution	Gas Boosting Pressure up to 420 Bar. Oxygen Purity Sensors installed. Truck Mounted Mobile. Stationary/	Max Pressure: 420 Bar, Maximum Purity: 99.99999%, Dew Point: -50 Degree C.	5

This is also to certify that M/s Neometrix Engineering (P) Limited E-148, Sector-63, NOIDA is currently executing an open order for up to 400 Nos. PSA Type Medical Oxygen Generation Plants for various Hospitals spread all over India, awarded to it by **Ministry of Health & Family Welfare Government of**



**India.** The contract has 5 years comprehensive Warrantee as part of contract.

These plants being manufactured for **Ministry of Health & Family Welfare Government of India** are for 100 LPM, 200 LPM, 500 LPM, 1000 LPM, 1500 LPM, 2000 LPM, 2500 LPM and 5000 LPM.

**The Order Copy is enclosed for ready reference.**

Neometrix Engineering (P) Limited has already **supplied, installed & commissioned** large number of these plants. **The NABL Lab reports of Oxygen Purity meeting Indian Pharmacopeia IP 2010 requirements are also enclosed with performance certificates/ inspection Notes.**

Under the same **Ministry of Health & Family Welfare Government of India** contract various PSUs and government organizations are also placing orders on M/s Neometrix Engineering (P) Limited for setting up of PSA Type Medical OxygenPlants in Hospitals all over India.

**The Order Copy from M/s Numaligarh Refinery is enclosed for ready reference.** These plants have also been supplied and Inspection notes are enclosed with this letter.

These documents very clearly bring out the fact that M/s Neometrix Engineering (P) Limited is OEM, Original Equipment Manufacturer for the PSA Medical oxygenPlant for Hospitals.

Neometrix has wide experience in PSA Medical Oxygen Plants. Following purchase order/ installation and commissioning documents are enclosed. With regard to Experience certificate, we wish to attach the following:



#	Name of Project*	Name of Client	Value of The Contract (in Rs. Lakhs)	PO Details	STATUS
1	<b>RATE CONTRACT FOR 100 LPM, 200 LPM, 500 LPM PSA Medical oxygen Generation Plants (18 Plants)</b>	Ministry of Health Government of India through HLL HITES	INR 1450.22 Lakhs	HITES/PCD/MHFW/OGP-01/2021-22/451 Dated 1 <sup>st</sup> May 2021/ Amendment-5 dated 05 July 2021	Commissioned
2	500 LPM PSA Medical Oxygen Generation Plants (5 Plants)	Numaligarh Refinery	INR 737.50 Lakhs	PO No. 4500023016 Dated May 05, 2021	Commissioned
5	400 LPM PSA Medical Oxygen Generation Plants (3 Plants)	Indian Army	INR 229.41 Lakhs	SO No. EEC/04/Oxygen Plant/COVID19/21 Dated 10/07/2021 Dated May 05, 2021	Commissioned
6	PSA Medical Oxygen Generation plants for various Hospitals in Rajasthan through Government of Rajasthan (12 Plants)	Government of Rajasthan	INR 598.45 Lakhs	Multiple Orders	Commissioned
7	PSA Medical Oxygen Generation plants for various Hospitals in UP (4 Plants), 200 LPM, 1500 LPM	Government of Uttar Pradesh	INR 288.00 Lakhs	Multiple Orders	Commissioned

**There are many more PSA Medical oxygen Generation Plant orders executed/ under execution by M/s Neometrix Engineering (P) Limited.**



**Neometrix Engineering (P) Limited is also DGAQA registered/certified company for Oxygen Systems. DGAQA Certificate, Indian Air Force PO Copy & Inspection Notes are attached for reference.**

Kindly feel free to contact us for any further details/ clarifications.

Yours Faithfully,  
(Signature of the Bidder, with Official Seal)

For Neometrix Engineering (P) Ltd.  
Director

Name: SHAIENDRA PRATAP SINGH

Designation: DIRECTOR

Organization Name: NEOMETRIX ENGINEERING PRIVATE LIMITED

Contact No. : 9810373283

(Signature of the bidder, with Official Seal)